

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1643.—Vol. XXXVII.

London, Saturday, February 16, 1867.

{ STAMPED ... SIXPENCE.  
UNSTAMPED...FIVEPENCE.

Mining Exchange, London.

**M**INING EXCHANGE, LONDON.—As the rules of the Mining Exchange prohibit all its MEMBERS from ADVERTISING MINING SHARES at FIXED PRICES, the Committee feel it their duty to notify that they have no means of offering redress to such of the public as may deal with those advertising shares at fixed prices. A List of the Members can be had on application to the Secretary.

**M**R. JAMES CROFTS, STOCK AND SHAREBROKER,  
No. 1, FINCH LANE, CORNHILL.  
(Established 23 years.)

Mr. CROFTS having devoted his attention to the position of a large number of mines which have recently emerged from almost total forgetfulness into favourable notice, refers to his remarks on p. 101, in this week's Journal, in reference to a selection he has made of such mines, of which the following is a list, and confidently recommends purchases:

Prince of Wales,	Drake Walls.
Mark Valley,	Redmoor.
Princess (St. Agnes).	Great Retallack.
Great North Downs.	South Condurrow.
North Crofty,	Rosewarne United.
Wheal Unity,	Frank Mills.
Gawton United.	Stray Park.
Prosper United.	Rose Hill & Ransom.
40 Wheal Ida.	Okel Tor.

\* \* \* FOR SALE, at nominal prices:—5 Snaefell, 8 New Devon Consols, and

Bankers: National Bank of Scotland, Finch-lane.

**W**ILLIAM LANE (SUCCESSOR TO JAMES LANE),  
44, THREADNEEDLE STREET, LONDON, E.C., STOCK AND  
SHAREDEALER (Established Thirty Years), has FOR SALE the following  
SHARES:—

15 East Russell,	£2 16s.	20 North Phoenix, £1.
30 Caldbeck Fells, 14s.	£1 18s.	50 Prince of Wales, 35s 6d.
50 Chontales, 22s 8s.	£2 8s.	25 E. Rosewarne, 17s, 6d.
10 Chiv. Moor, £6 8s. 9d.	29 Frank Mills, 27s, 6d.	10 Prosper Untd., £2 12s.
5 Clifford, £6 15s. 6d.	5 Frontino (Gold), 5s 3d	25 Pestarena (Gold), £2
5 Copper Hill, 16s.	50 Gt. No. Laxey, 29 3d	paid, 30s.
10 Chiverton, 28s 4s.	20 Great Laxey, £1 6s.	10 Redmoor, 10s. 9d.
50 Crebri, 11s.	25 South Darren, 28s.	20 So. Condurrow, 17s.
25 Drake Walls, 21s. 3d.	50 West Wh. Kitty, 7s 3d	50 West Wh. Kitty, 7s 3d
60 Don Ped. d. Rey, 22s 3d	50 Hallenbeagle, 13s. 6d.	5 W. Chiverton, £60 12s.
5 East Basset, £19 12s.	60 Mineral Rights, 9s.	5 W. Caradon, £10 12s.
35 East Carn Brea, £3 3 9	30 N. Treaskeyer, £2 12s.	50 W. Drake Walls, 5s 6d

SPECIAL BUSINESS in Great Laxey and West Chiverton, either for cash or time on.

Clients and parties in the country wishing to dispose of shares will find advertisement a ready means of doing so, by forwarding me a list of their holding.

Approved references given to any part of the United Kingdom.

Bankers: London and County Bank.

**M**R. LELEAN, ENGLISH AND FOREIGN STOCK AND  
SHAREDEALER,  
11, ROYAL EXCHANGE, LONDON, E.C.

Bankers: Robarts, Lubbock, and Co., Lombard-street.

**G**UIDE TO INVESTORS.—MR. LELEAN'S STOCK, SHARE,  
AND FINANCE REGISTER for February contains the seventh of a series  
of articles on the whole circle of Investments, and an analysis of the accounts  
of all the Joint-Stock Banks and Finance Companies; with such information as  
is necessary to guide intending investors amidst the shoals and quicksands of  
the multifarious species of investments that now present themselves.

Published by Mr. BAKER LELEAN, at his office, 11, Royal Exchange, London,  
E.C. 6d. per copy, or 5s. annually, post free.

**J**HON RISLEY, 32, LOMBARD STREET, and MINING  
EXCHANGE, LONDON, E.C., has SPECIAL BUSINESS in East Green-  
ville, Wheal Buller, and West Caradon shares.

**M**ESSRS. WILSON, WARD, AND CO., STOCK AND  
SHAREDEALERS,  
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.

Can recommend two good mines for investment.

**M**R. THOMAS THOMPSON, MINING OFFICES,  
12, OLD JEWRY CHAMBERS, LONDON, E.C.

Mr. THOMPSON's official connection with Great Laxey having ceased, and as he is constantly receiving the most reliable information about the mines he would strongly advise his friends to consult him before operating.

Mr. THOMPSON strongly recommends the immediate purchase of Westminster.

**G**REAT LAXEY MINING COMPANY (LIMITED).—  
CAUTION.—The attention of the directors of this company having been called to an advertisement of Mr. Thomas Thompson in the Journal, evidently published with an intention to injure the company, notice is hereby given, that Mr. THOMAS THOMPSON has been DISMISSED from his POSITION as LONDON SECRETARY of GREAT LAXEY, and the public are CAUTIONED against ACCEPTING any INFORMATION from him relative to the affairs of the company.

GEO. W. DUMBLELL, Chairman of Directors.

Isle of Man, February 5, 1867.

**G**EORGE RICE, STOCK AND SHAREDEALER, 78, OLD  
BROAD STREET, LONDON, E.C. (Member of the Mining Exchange),  
(25 years' experience), TRANSACTS BUSINESS in MINING SHARES, at close  
prices:—

Latest quotations.

Bryn Gwilog.....	£15 - £17 12s	East Carn Brea .....	£ 5 12s - £ 6
Chiverton.....	8 1/2 - 8 3/4	Great Laxey.....	17 1/2 - 18
Clifford.....	6 1/2 - 7	Great Retallack.....	4 1/2 - 5 1/2
Chiverton Moor.....	6 1/2 - 6 5/8	Marke Valley.....	4 - 4 1/2
East Basset.....	18 - 20	North Crofty.....	5 3/8 - 5 5/8
East Chiverton.....	1 1/2 - 2	North Treaskeyer.....	2 1/2 - 2 3/4
East Grenville.....	1 1/2 - 2 1/2	North Wheal Basset.....	2 1/2 - 2 3/4
East Carn Brea.....	3 1/2 - 3 3/4	Prince of Wales.....	35s - 37s
East Lovell.....	9 1/2 - 10 1/2	Prosper United.....	3 - 3 1/4
East Russell.....	3 1/2 - 3 3/4	Tincroft.....	13 1/4 - 14

MESSRS. BRYN GWILOG LEAD MINE.—Only 500 shares. Price about £20  
share. No calls. Regular dividends expected this year. Shares are now  
selling at half the price of many Cornish lead mines making heavy calls.

SPECIAL BUSINESS in St. John del Rey, Chontales, and Caldbeck Fells.

GEORGE RICE can advise investors what shares to sell and what to buy in the  
present state of the market.

Money advanced on mining shares.

Bankers: Bank of England.

**M**R. JAMES HUME, 74, OLD BROAD STREET,  
TRANSACTS BUSINESS in ALL DESCRIPTIONS of MINE  
SHARES, nett, at closest prices.

SPECIAL BUSINESS in East Russell, East Lovell, Great Retallack, Great  
Tolgus, Kitty (St. Agnes), Prince of Wales, Redmoor, East Carn Brea, Carn  
Brea, Cook's Kitchen, North Crofty, Bottles Hill, South Condurrow, Chontales  
Gold, Pestarena Gold, &c.

Many shares recommended by Mr. HUME have had a very great advance, and  
there are several which Mr. HUME feels assured will yet rise 200 or 300 per cent.

Mr. T. HUME's "Circular" forwarded on application.

Bankers: The London Joint Stock Bank.

**W**ALTER TREGELLAS, 122, BISHOPSGATE STREET  
WITHIN, E.C., DEALS in ALL KINDS of bona fide STOCKS and  
SHARES, and BRITISH and FOREIGN MINES, either for cash or the  
fortnightly settlement at close prices.

Recommends the purchase of Don Pedro North del Rey, Anglo-Brazilian, East  
Caradon, South Crofty, West Frances, West Tolgus, East Gunnislake, Chiverton,  
Moor, Camborne Vean, Emily Henrietta, and Westminster.

Bankers: Alliance Bank.

**M**RS. GEORGE BUDGE, NO. 4, ROYAL EXCHANGE  
BUILDINGS, LONDON, E.C. (Established 19 years), has FOR SALE at  
nett prices:—100 Hollybush (£2 paid), £2 (good to buy); 50 Pendene, 13s. 6d.;  
100 North Dolcoath, 3s.; 100 Anglo-Brazilian, 12s. 6d.; 50 Crebri; 30 Gawton,  
2 1/2%; 25 Okel Tor; 15 Tolcarne, 6s. 6d.; 2 Devon Great Consols, £4 17 1/2%; 100  
South Grenville, 9s. 3d.; 70 Great South Tolgus, 11s.; 50 Lady Bertha, 2s.; 50  
Mineral Rights, 9s.; 60 Pestarena, £1 3/4%; 65 Wheal Wh. Kitty; 25 Drake Walls,  
1 1/2%; 2 Minera, £1 60; 30 South Darren, 27s. 6d.; 50 Frank Mills, 28s.; 150  
Don Pedro; 60 United Mexican, £2 23/4%; 20 Great Retallack, 4s. 6d.; 10 East  
Carn Brea, £3 3/4%; 40 South Condurrow; 80 East Seton, 7s.; 100 Great North  
Laxey; 120 Bottles Hill, 5s.; 20 Dale, 2s.; 40 East Rosewarne; 5 West Chiverton,  
10 Marke Valley; 100 Hallenbeagle; 50 Prince of Wales; 10 Llanfair  
Quarry, 10s.; 70 New Treleigh; 50 East Bottles Hill; 50 Great N. Downs;

10 West St. Ives, 12s. 6d.

PETER WATSON'S "WEEKLY MINING CIRCULAR AND  
SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of  
yesterday (Friday), Feb. 15, No. 411, Vol. IX., price 6d. each copy, forwarded on  
application, contains a leading article on the Share Markets, and information

North Wheal Crofty.	Granberry & St. Aubyn.	Trumpet Consols.
East Wheal Lovell.	East Carn Brea.	North Rosekar.
East Wheal Russel.	Stray Park.	Great Retallack.
Prince of Wales.	East Caradon.	Clifford Amalgamated.
West Caradon.	East Rasset.	Cook's Kitchen.
Great Wheal Vor.	Wheal Trelewany.	Redmoor.
West Chiverton.	Great North Downs.	West Seton.
Wheal Chiverton.	North Downs.	Wheal Buller.
Chiverton Moor.	Gawton.	New Seton.
Great South Tolgus.	Wheal Kitty.	East Pool.
Prosper United.	Wheal Seton.	West Drake Walls.

Also, report of the Drake Walls meeting of shareholders, with reference to the  
division of West Drake Walls.

PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London, E.C.

**S**TOCK AND SHAREDEALER.—MR. PETER WATSON,  
ENGLISH AND FOREIGN STOCK, SHARE, and MINING OFFICES, 79,  
OLD BROAD STREET, LONDON, E.C.

Railway, Joint-Stock Banks, Dock, Insurance, Canal, Mining, Steam-ship, &c.,  
and every other description of shares bought and sold at nett prices.

TELEGRAPHIC MESSAGES to BUY or SELL Railway, Bank, Mine, and  
other shares and stocks, punctually attended to, at nett prices for cash, or for  
fortnightly settlements, with advice as to purchases or sales.

Twenty-two years' experience.

Two in Cornwall and Twenty in London.

Bankers: The Alliance Bank, and the Union Bank of London.

From the close proximity of his offices to the Stock Exchange, as well as the  
Mining Exchange, PETER WATSON is enabled to act with promptitude on all  
orders entrusted to him, which at all times are carried out with punctuality,  
and to the best advantage of his clients.

**M**R. EDWARD COOKE, STOCK AND SHAREDEALER,  
76, OLD BROAD STREET, LONDON, E.C.

Has SPECIAL BUSINESS in Chontales, Prince of Wales, East Lovell, Frank  
Mills, South Darren, West Caradon, Prosper United, and North Crofty.

Stock Exchange securities dealt in at close market prices.

Satisfactory references given in any town in the United Kingdom.

Bankers: Alliance Bank.

**M**R. C. A. POWELL, SHAREDEALER, 78, OLD BROAD  
STREET, LONDON, E.C. (Member of the Mining Exchange).

Purchases or sales effected at nett prices, for prompt cash or account. Clients  
treated with all care at a fair margin on the market price.

MR. C. A. POWELL is prepared to BUY or SELL shares in any mines currently  
dealt in, and devotes especial attention to those prominently before the public.

Daily Price List on application.

Bankers: Bank of England.

**M**R. WILLIAM SEWARD, STOCK AND SHAREDEALER,  
19, THROGMORTON STREET, LONDON, E.C.

**M**R. JOHN LITTLE, STOCK AND SHAREDEALER,  
77, OLD BROAD STREET, LONDON, E.C. (late of Redruth).  
Immediate attention to orders by telegraph or letter.

Prompt cash settlements.

**M**ESSRS. WARD AND JACKMAN,  
STOCK AND SHAREDEALERS,  
CUSHION COURT, OLD BROAD STREET, CITY, E.C.

Closing Prices Friday Evening, February 15.

Buyers. Sellers.

Chiverton.....	£ 8 1/2 - £ 8 3/4	Marke Valley.....	£ 4 1/2 - £ 4 3/4
Chiverton Moor.....	6 1/2 - 6 1/2	North Crofty.....	2 1/4 - 2 1/2
Clifford.....	6 1/2 - 6 1/2	South Condurrow.....	5 1/2 - 5 1/2
Cook's Kitchen.....	10 1/2 - 11	Prince of Wales.....	35s. - 37s.
East Caradon.....	1 - 1 1/2	Prosper United.....	3 - 3 1/4
East Lovell.....	9 1/2 - 10	Tincroft.....	13 1/4 - 14
Great Retallack.....	47s. - 49s.	West Chiverton.....	60 - 62
Great Vor.....	16 1/2 - 17 1/2	East Gunnislake.....	1 1/2 - 2
Great Laxey.....	16 - 16 1/2	Wheal Buller.....	25 - 27
Great Wheal Basset.....	3 1/2 - 4	Wheal Bassett.....	65 - 70
Great Wheal Vor.....	3 1/2 - 4	Wheal Unity.....	2 - 2 1/2
Great South Tolgus.....	3 1/2 - 4	Wheal Kitty (ex div.).....	3 1/2 - 3 1/2

Messrs. WARD and JACKMAN refer their friends to their remarks on p. 101 respecting many of the above mines.

Bankers: London and Westminster, Lothbury.

## Original Correspondence.

## OUGHT COAL MINE OWNERS TO BE MADE AS RESPONSIBLE AS FACTORY MASTERS ARE FOR INJURIES FROM THEIR NEGLECT OF PRECAUTIONS?

SIR.—As it cannot be denied that the proposal, to render mine owners more responsible than other employers for the injuries caused by their neglect of precautions, requires justification, I must beg your readers to consider, if that be not done, what is the only alternative; for allowing the present average loss of 992 lives a-year to go on unchecked is not, I trust, to be thought of.

Assuming, then, that colliery accidents must be considerably diminished in number and destructiveness of life, one of two methods must be adopted, or both be united. Either, as has been very ably advocated in the Journal, the number, the authority, and the responsibility of the Inspectors must be largely increased, so that they may be really able to prevent avoidable causes of danger, and justly held responsible if such causes are allowed to continue; or the coalowners and agents must be induced to observe and enforce the precautions necessary for safety much more carefully than they now do. The simple question is, ought we to rely for the safety of miners chiefly on the vigilant interference of a very numerous staff of Inspectors and their assistants, or chiefly upon rendering safe mining more, and dangerous mining less, profitable? We need not rely exclusively upon either, nor ought we to relax one precaution because another, also in addition, would be better. If the first method is to be adopted, not only must there be a very large and costly staff for the complete and frequent inspection of above 3000 mines, but there must be also a very embarrassing increase of interference with the management of mines, with attendant division, and, therefore, diminution, of responsibility between the Inspectors and Agents, and great increase of attempts to enforce, by vexatious penalties, changes which the Inspectors will desire, that they may not be blamed if accident should occur, but which the Agents will resist, as troublesome or expensive, out of proportion to their utility. No doubt the necessity of many precautions is too evident to be disputed, and the observance of such should be, of course, invariably enforced; but there may be many others required for safety at some times, and at some places, but not always, or everywhere, the observance or non-observance of which might be wisely left to the discretion of the owners and agents themselves, *if they are fully responsible for the result*, but not otherwise. For example, suppose it should be enacted—as it very likely may be, after the terrible lessons we have had—not merely that mine workings should be, under ordinary circumstances, so ventilated as to render the gases in them harmless, but that coal getting shall be suspended, at least except at the mine owner's risk, whenever and wherever the ventilation is insufficient for safety. It would evidently be most troublesome and vexatious, and, I think, impracticable, to enforce such a rule by inspection merely, but not very difficult to induce its careful observance by rendering the mine owner liable to pay a compensatory penalty of (say) not less than 20*l.*, or more than 200*l.*, for every death caused by his neglect of such a rule, all or part of which to be paid to or settled for the benefit of the widows and orphans of those killed. Such would be the just consequence—first, of the owner illegally allowing the air of his mine to continue explosive; and, secondly, of his imprudently allowing coal getting to be continued before the ventilation necessary for safety is established or restored. Again, suppose that it be enacted—as it ought to be—that the roof of every mine shall be securely propped by the owners or agents—*i.e.*, by men employed by them—such a rule fairly observed would save some 200 lives a year out of the 395 now lost by falls of roof or of coal, and many hundred broken limbs, or other maiming injuries; but such a rule could not be enforced by inspection and penalties, if at all, without the most troublesome interference with mine management. It would, however, be most carefully observed in all mines, as it now is in many, if all mine owners were liable, as all factory masters are, to a penalty of not less than 10*l.*, or more than 100*l.*, whenever any person suffers bodily injury from such master's neglect of certain prescribed precautions.

In the case of factories, the master may be directed to have strapping or shafting considered dangerous securely fenced, and if any person suffer bodily injury because of his neglect of that precaution, such person may, by means of this law, obtain considerable, though often insufficient, compensation; but, what is far more important, the cases of accident thus arising have become extremely rare since that law came into operation. Though it is unlikely that the same complete success would attend an extension of the law from factories to mines, it cannot be doubted that it would be very considerable; for mine owners would soon find out, as masters of factories have, that it would be cheaper to prevent accidents than to pay compensatory penalties for them, and such penalties are much more effectual, as well as more fair, than merely punitive penalties are, as much heavier ones would be imposed if the sufferers or their families were to receive part as compensation, which is more just, both as regards the sufferers and as a reasonable punishment for neglect, which is in many such cases highly culpable. If it be objected that such liability would be unjust towards mine owners, which I do not in the least allow, I reply it could be injurious to those only who managed so badly as to have more than the average of compensations to pay, as the average of these, as of all other expenses of mining, would simply add to the cost of coal, and that in too trifling a degree to check its consumption or impede the development of the trade. To all who succeeded in reducing expenses for accidents below the average the change would be a source of profit, by sheltering them from the unjust competition of rivals, who neither incur the cost of preventing accidents nor bear the losses their neglect occasions. It may very naturally be objected that the cases of factories and of mines are not parallel, it being far easier for a factory master to guard his workpeople by fencing his shafts and straps, than for a mine owner to guard his miners from the numerous dangers to which they are exposed. That the fact of machinery being or not being properly fenced can be readily and completely proved, while the often complicated question of the cause of a mine accident is little fitted to be decided by a court of law, and that such a rule as is proposed would often work with hardship and injustice, generally giving either too much or too little compensation. Granting, as is possible, that compensation by means of penalties will be sometimes excessive, and often inadequate, I reply that imperfect justice, or even occasional injustice, is better than the almost invariable denial of justice; that imperfect compensation for injuries suffered is better than none; that the difficulty of deciding such cases with approximate fairness, which is the best that is ever reached by law, is not greater than in settling claims after railway accidents; and decisions for mine cases, if given by stipendiary Magistrates, County Court Judges, or other selected skilled and impartial arbitrators, would be likely to be more satisfactory than those given by unskilled juries, while the risk of excessive compensations would be guarded against by fixing a maximum compensating penalty, which would be awarded only in cases of extreme culpability, or of extraordinary injury suffered.

Such a method for awarding more or less compensations for injuries to miners, according to the degree of blame and of suffering, occasioned essentially, though not solely, from the mine owner's neglect of precautions directed to be observed or to be enforced by him, would be just, not simply towards the immediate sufferers, who, though perhaps partly, have not been wholly to blame, still more clearly would it be just towards their helpless and wholly blameless wives and children, upon whom now the loss falls with such crushing weight; towards the payers of poor rates, now liable for the support of those rendered destitute by accidents at mines (which, by the way, are not rated for the relief of the poor, as factories are); and towards all mine owners who do adopt costly precautions, by sheltering them from the unjust competition of those who do not. HUMANS.

P.S.—Railway passengers would be far less secure than they now are were railway companies not liable to pay heavy compensation for those injured by the neglect of any of the complicated precautions necessary for safe travelling, and no one dreams of relieving them from that just responsibility, though many may wish it were awarded with juster consideration. So also coal miners would be in far less danger than they now are, though even then far from safe, if mine owners were responsible for all the losses from their neglect

of precautions not more complicated than for railways cases. How the men can be best guarded from the dangers their own recklessness occasions is not at present the question.

## MECHANICAL VENTILATION.

SIR.—I have read with much interest the remarks of your Northumberland correspondent in last week's Journal upon mechanical ventilation, and although I am myself much averse to the displacement of the furnace by any machine, because I do not believe that the advantage which the furnace possesses in causing the ventilation to continue after an accident can ever be compensated for, I consider that mechanical ventilation is capable of being rendered far more efficient than it is at present. It will be admitted that all mechanical ventilation is dependent on one of two principles—that of the suction pump, embracing the machines of Struvé, Nixon, and others; and that of the centrifugal pump, including the machines of Guibal, Lemielle, and all other fans—which the fan principle may be considered to possess the most perfect representative in the Lemielle machine, whilst the Nixon machine is the most perfect representative of the suction pump principle. I consider that the Lemielle machine is the most powerful fan that can be hoped for, and yet that it is not equal to the Nixon machine, as at present in use—the latter being, in my opinion, capable of almost indefinite improvement by a comparatively small alteration. For the present I shall assume that Lemielle's machine is equal to Nixon's, as it now stands, although this is giving an unfair advantage to the former machine, and simply mention that all fans have the disadvantage that there is only one speed which will give the maximum power, and that enormous and unwieldy machines are requisite to produce even a moderate quantity of air, whilst the suction machine can with little trouble be made to yield almost any quantity, such quantity being capable of increase or diminution without loss—the quantity of air varying with the power employed.

Your Northumberland Correspondent, no doubt, appreciates the fact that the great defect of all ventilating machines is their liability to injury in the event of an explosion—the result being the total and instantaneous stoppage of the ventilation throughout the mine. Now, with fan machines I do not think this is remedied, because it is necessary to have a free opening from the shaft to the machine, in order to produce ventilation at all. All ventilation must pass through the fan without impediment, and there must be no means of exit except through the fan; consequently, the result of an explosion is to destroy the fan, and render the restoration of the ventilation impossible. With the suction pump the case is totally different, there being nothing to prevent such an arrangement as shall permit an explosion to vent its full force without damaging the principal working parts of the machine, and allow of the restoration of the ventilation in five minutes. I should desire no better machine than Mr. Nixon's to work upon, and the additions I would suggest might all be made below the surface, and would not be very costly—mere trifles in comparison with the cost of the machine. It may be difficult to describe an arrangement without reference to drawings, but, no doubt, practical men will understand my views sufficiently to judge of their value or otherwise.

In the first place I may state that I consider the essential feature in a good ventilating machine is a long, slow stroke, such as Mr. Nixon's especially admits of. Assume piston 20 ft. by 20 ft. and 30 ft. stroke, which could, by arrangements not widely different from those in use at the Navigation Colliery, be run at ten double strokes per minute, or as the piston is carried on wheels running on a tramway there would be no great difficulty or danger in running it at twice the speed, or in doubling the length of stroke, so that the extraction of 250,000, or even 500,000, cubic feet of air per minute would be comparatively easy. But the great modification required both at the Navigation Colliery and wherever else the machine may be used is in the arrangement of the valves, which should be in chambers distinct from the cylinder, and placed in the same way as those of Godwin's flood-pump, for example (see *Mining Journal*, July 26, 1862). The valves could be made much larger than at present, would close tighter, and would be less difficult to fix. These valve chambers are placed at the side or beneath the cylinder—the two inlet valve frames being near the centre of the cylinder (only sufficient being left between their lower ends—for they are laid diagonally—to give ample space for the passage of the air from the upcast shaft), and the two outlet valve frames just beyond the cylinder ends. There would be openings without valves from the chambers between the inlet and outlet valves and the cylinder near the cylinder end; and it will be seen that the worst result of an explosion would be to blow away the valves, the cylinder and piston being thus placed beyond the reach of injury.

But to remove the evil of the stoppage of ventilation after an explosion, I would build two sets of valve chambers at (say) 6 ft. below the surface, and one on each side of the cylinder, and communicating by distinct channels with the shaft. Between the shaft and each set of valve chambers, and between each set of valve chambers and the cylinder, I would provide stout iron sliding doors, so that there should never be at the same time communication between the shaft and the cylinder through both sets of valves (though they might be worked a week each alternately, to prevent them being found out of order when wanted). The reason of this arrangement is obvious. In the event of an explosion destroying one set of valves the communications with the injured set could be at once shut off and the other opened. But as any amount of valve room could be furnished, and as from the position of the valves it would take a more than ordinarily severe explosion to injure them, it is probable that the injury done could speedily be put right, so that a new reversal might be made in case of a supplementary explosion half an hour afterwards. Where an upcast is used solely as a ventilating shaft—a machine being used—I think it would not be difficult to suggest an arrangement by which injury even to fans might be prevented, but for the present that is unnecessary. H. E.

Aberdare, Feb. 11.

## COAL AND STEAM SUPERSEDED.

SIR.—I was pleased to read in last week's Journal the lucid account of the invention of Messrs. Jas. Smith, of Barkeley House, Seaforth, Liverpool, and S.A. Chease, of Egremont, Cheshire—an engine based upon hydrostatics and pneumatics, by which a continuous motive-power is obtained. I am delighted to see such an invaluable agent developed, the benefit of which to our royal and mercantile navies is paramount; inasmuch as the vast space occupied in steam-ships for coal is a drawback to economy in marine transit, to say nothing of the great heat throughout the ship, and particularly in the stoke and engine departments. The large paddle-steamer employed in the North Atlantic trade leave the River Mersey for New York with about 1700 tons of coal, the first cost of which is about 1*l.*, per ton for South Wales—1700*l.*; space occupied for coal, displacing freight at 3*l.* per ton, 5100*l.*—total, 6800*l.* Smith's engine will altogether eradicate that item of dead weight in £. s. d.

Then, again, there are steamers engaged in India, China, Africa, &c., where coal has to be sent from England; from first cost, freight out, and its deterioration abroad, storage, &c., its using cost cannot be computed abroad at less than 5*l.* per ton, and a vessel burning 50 tons per diem—250*l.*, it must be plain to the most nescient that Smith's engine, which does away with coal and steam, is a most valuable invention in marine propulsion. When we come to look at its vast saving and cleanliness in our large towns and manufacturing districts, it nearly outsteps belief, from the fact alone that the recent rise of coal in the cotton spinning districts of Lancashire of 4*s.* per ton is a serious drawback upon profits where manufacturers use 50 tons per diem; it is 3000*l.* per year, irrespective of the usual price, 4500*l.*—total, at recent prices, 7500*l.* per year.

Who is James Smith? the engineering fraternity ask, many of whom ridicule the idea of a motive power without coal and steam to start it. Well, Mr. Smith is the first geometrician extant, and the only master of harmonious mathematics the world can produce, who has with his great natural ability, and the aid of a self-taught mathematical mind, perfected the most valuable invention of the day—an invention that will revolutionise the trade of the world, in both manufacture and transit, and bring the cost of both down to a minimum. Mr. Smith was formerly a timber merchant and shipowner at Liver-

pool, and a native of that unrivalled port of commerce and talent, now a retired gentleman, a member of the Mersey Docks and Harbour Board, and the Chairman of the Mercantile Marine Board, and nominated by the Board of Trade. JOHN CLARE, Inventor and Patentee of Her Majesty's iron steam frigate Warrior.

## COAL DISTRICTS IN BOHEMIA AND SAXONY.

SIR.—It is, as you are aware, many years since I first visited Central Europe, to ascertain the nature and extent of its mineral resources. At that time there was for coal only local consumption; railways had not then opened up trade, and steam-power applied to raising coal in Bohemia was little known, and the Saxon mines were comparatively in their infancy. The existence of the coal fields in the Plauensche Grund, near Dresden, was proved, but the deepest seam had not been reached, and it has been reserved for later years to open up some of the best collieries in Saxony, in which native capital alone has been employed,—the king setting his people the example of spirited working. At the time referred to Bohemia was almost a "sealed book" to the British tourist, the railway having been only a very short time opened to Dresden, and one had but a faint idea of the immense basins of lignite lying between Aussig on the Elbe, and Hof on the confines of Bavaria, and passing under the valley of Teplitz, under Dux Brux, Komotau, Karlsbad, Elbogen, Falkenau, and Eger, and varying in thickness from 20 to 100 ft.—an inexhaustible supply. Everywhere has this coal field been "taken up" by private parties from the Government, to whom is paid a small yearly rent, and from whom the coal is held in perpetuity, subject only to the payment of 5 per cent. on the profits made by the colliers. Large capitalists, who can afford to allow their money to remain some years dormant, will here realise fortunes, but the superabundance of the coal renders it a matter of some surprise that no very large amount of foreign capital, comparatively, has found investment here, although several railways are in course of construction, which must lead to development. It struck me with wonder, and will doubtless surprise many of your readers, to learn that in a remote part of the country visited by me lately, and separated from every other coal field, exists a basin of coal, the seam varying from 3*l* to 5 ft. in thickness, which can be worked dry, with a good roof and good bottom, which remains unwrought for the sole reason that the natives think no seam under 10 ft. thick will pay for working. Coal at this place is selling for 20*s.* the ton. There is an annual demand for 300,000 tons, which is supplied by collieries 50 miles distant, 15 miles being by the road over a mountainous country. This coal would be raised in England for 3*s.* per ton.

At another place I inspected an isolated coal basin, with a similar seam, which might be opened up by a large adit for 2000*l.*, and the coal brought to the place of shipment by small trams for 6*s.* a ton, when it sells for 14*s.* But this is idle—first, because the seam is only 4 ft. thick; and, secondly, that it is in the hands of a charitable corporation. In either of these places might capital be employed to great advantage.

Many are the enquiries making as to the why and wherefore of the increase of mining industry in Austria, Bohemia, Saxony, Bavaria, Prussia, Belgium, and France, and its decrease in Great Britain and Ireland. The last three years, devoted as they have been by me to the careful examination of the surface and underground operations on the Continent, enable me to give a reply to this, which I hope to do when I have touched on one or two other coal fields, and on several of the metallic mines and mineral districts of the Continent. I do not pretend to possess a profound knowledge of geology or mineralogy, but 30 years of an active life have given me an insight into the working of British and Irish as well as continental mines.—Bonn, Feb. 12. S. E. J.

## THE MINERAL AND INDUSTRIAL RESOURCES OF NEWFOUNDLAND—No. III.

SIR.—Where the rocks which rear their heads amidst the savannahs have been examined, they have exhibited indications of alum, roofing slate of excellent quality, and beds of gypsum (sulphate of lime), in quantity sufficient to meet the requirements of the whole universe. The leading geological features here may be summed up in the generic terms of schist, coarse sandstone, and green gault; these formations extend from Hermitage Bay, on the south-west, to Bonavista Bay, on the north-east. Of the specific mineral arrangements literally nothing is known. Rumour would lead us to infer that vast treasures are embossed under the surface, the earth having upon several occasions yielded to the admiring gaze of a solitary traveller a small detached piece of one or other of the ores of those metals sought after with such avidity in almost every part of the "wide, wide world."

Pursuing the course to the east from this locality, conglomerate and transition rocks combined with clay-slate become most generally diffused. These lie in different directions, and occur in various degrees of thickness. So early as 1746 a correspondent of the "Gentleman's Magazine" called public attention to the excellence and variety of the porphyry constituting so large a portion of this locality. We now arrive at the verge of the eastern division of the island, which may be regarded as bounded on the north-east by Trinity and Conception Bays, the latter in the vicinity of St. John's, the capital of the island; and on the west by Placentia Bay, and on the north-west by a range of low granitic and schistose hills, which separate it from the savannah. In Shoal Bay, about 15 miles from St. John's, a copper mine was worked upwards of a century ago, and found to yield a grey sulphur of that metal of a high percentage, but from some unexplained cause the mine is now deserted. From the associated rocks—sandstone and clay-slate—I have little doubt that with the improved appliances of modern skill this sett might be again opened with good prospects of success. It is over this extensive eastern tract of country, to the confines of which I have gradually led my readers, that the principal metalliferous rocks permeate the soil. Granitic rocks are the most generally diffused over the whole island, and by their preponderance stamp the colony as one of a very primitive character in the chronology of the world. After these, porphyry, which is found in profuse abundance in almost every direction, chlorite, epidote, trap-rock, schist, gault, horn-blende, and dolomite constitute the greater portion of the remainder, whilst other minerals, whose existence invariably indicate the proximity of the useful metals, are disseminated through the main rocks. Calc-spar, sulphate of baryta, and fluete of lime occupy no trifling position in the category of minerals prevalent here, and whose presence affords such conclusive evidence of the metalliferous character of the country. Thus far, therefore, we notice that every element to warrant an active prosecution of mining operations exists, and that in conditions which promise a successful issue. First, the important and steady gradations from the primitive to the secondary formations; and, secondly, the presence of those minerals from mundic, or sulphure of iron, which, to employ an expressive Cornish adage, "rides a good horse," to the usual associates of the prizeable metals discovered in Cornwall, Derbyshire, and other home mining districts. How far success has attended the limited prosecution of mining adventures I shall in the sequel endeavour to show. The district of Cape Ray is described by Sir Richard Bonnycastle as a region of primitive and metalliferous rocks, bearing south-west to north-east, and such in my more recent researches I found to be the case. The coast along Cape Ray eastward is composed chiefly of granite, with frequently patches of mica-schist. From Cape Ray to Garia, a distance of some 25 miles, the sea-board, as well I could determine from the temporary examinations along the shore in a boat, was entirely devoid of minerals of a metalliferous character.

I was positively assured that in the Bay of Garia coal had been discovered; such, however, was not the case, neither could I find traces of any metals worth special notice. Here large patches of decomposed schist intersect the granite. From hence to La Poile a hungry granitic range prevails, to the perfect exclusion of every more promising feature, though I certainly spared no pains to discover some metalliferous indications. The shore from La Poile to Burgeo exhibited a corresponding degree of metallic dearth. The tedium of the voyager at this place meets with an agreeable change in scenic character. A cluster of small islands, attractive in their wild sterility, composed entirely of granite, and presenting no feature to arrest the mineralogist, form a notable and conspicuous object to the searcher

after the picturesque, and rouse the enthusiasm of the admirer of Nature's erratic freaks. The scenery retains its romantic character until we approach Cape La Hune. The geological bearings continue unchanged, except that the old granitic rocks present unmistakable evidence of intersection with syenite. I must not omit to mention that in the clay-slate of the Bay of Faucheur veins are discovered, of the width of from 1 to 2 feet, yielding plumbago, of the two generally prevailing species, the granular and laminated. As my time was too limited to permit of a very minute examination, I could not determine the occurrence of the solid variety, the "pencil lead," which has for so long constituted the staple product of Borrowdale, in Cumberland, though, from the fact of the geological formation being identical with that locality, I should not be surprised to find further and more extended explorations resulting in its development. In the direction of Bay Despair the metalliferous ground assumed a more positive character, and at the intersection of syenite and clay-slate which occurs here, were veins of quartz associated with mica in considerable quantities, together with promising veins of lead in the form of galena; ample evidence also is here afforded of the existence of gold, but whether in a sufficient quantity to pay for its development remains to be proved. There are also in this highly interesting bay numerous deposits of plumbago, well worthy the attention of capitalists. Hence to Fortune Bay metalliferous ground constantly invites examination, and similar inducements present themselves in the direction of, and at, Point May, and thence, a distance of 15 miles along the east coast, to Lawn Bay. I must now rise, in order to call attention to the results of active operations, and have thoroughly established the correctness of my conviction of the vast mineral hordes on this long-neglected island, hordes which, by their readiness of access, and other encouraging circumstances, offer the strongest inducement for the investment of capital and the display of mining skill, with a prospect of remuneration to all who may be induced to embark in the undertaking.

A mine has been opened in Little Lawn Bay, on the southern part of the promontory which divides Fortune Bay from Placentia Bay, in a formation consisting of syenite and clay-slate. This sett, in consequence of a favourable report I made of it on my first examination, was opened upon by the union of a few English friends, and under my supervision. Without entering into minute detail, which, though of the first importance to the owners of the property, might not afford sufficient interest to the general reader, I will briefly state the progress since made, and the prospects which now present themselves, and leave others to infer whether I am not justified in my confidence of the peculiar merits of Newfoundland as a field for remunerative investment. After extending an open cut made to the distance of 12 to 15 feet, we discovered, at the depth of 12 feet, a small vug or opening in the lode, containing what proved to be black oxide, and vitreous, ruby, and horn-silver, intermingled with fluor-spar. The portion of silver ore which came into my possession weighed from 20 to 25 lbs. The black oxide, through the ignorance of the workmen, was thrown away with the rubbish. Fortunately, I obtained a minute quantity, which I had submitted to the action of the blow-pipe, and satisfied myself of its constitution and value. Amongst other specimens, some of which I sent through Prof. Hunt to the Geological Society's Museum, I forwarded some to Mr. Christie, of Truro, for analysis. This gentleman reported as follows:—

## SOUTH LODE.

No. 1 contains 63% per cent. of lead, and 5 ozs. of silver to the ton.  
No. 2 contains 70% per cent. of lead, and 6½ ozs. of silver to the ton.  
SILVER, OR NORTH LODE.

No. 3 contains 78% per cent. of silver.

Other analyses exhibited analogous results. Up to the present time this mine supports the high character which it acquired at its inauguration, and I feel persuaded that it will continue to uphold its present high position, confirmatory of the metalliferous wealth of this interesting locality, and have experienced unbounded satisfaction in witnessing the increasing wealth embowelled in the earth as my researches have extended to Placentia Bay, where it appears to have reached its acme. Under the incentive of the success attending my explorations at Little Lawn Bay, I was employed to test the very plot of ground secured from the British Government by the New York, Newfoundland, and London Telegraph Company, and, upon a tract of land where I had noticed marked indications of a galena deposit, success rewarded my energies and perseverance in the development of a lode of lead of a remarkably soft and pure quality, and of an amazing thickness, embedded in a metamorphose schist, and commingled with a peculiar rose-coloured calcareous spar running nearly due east and west, with a cross-course bearing north and south underlying west, composed of crystallised quartz, killas, flookan, and oxide of manganese. The average width of the lode is 4 or 5 feet, and even in some instances this width is greatly exceeded. The lode is intersected at short intervals with vugs or caverns, some of them of great extent, and all containing large deposits of prill ore. From one of these caverns, containing 700 to 800 tons of ore, I raised 150 tons in about 10 weeks. Of the quality of the ore I need only say it is slightly argentiferous, and it averages 81% per cent. of galena, the dredge yielding an average of 20 per cent. of ore. So far from the workings evidencing signs of exhaustion from the heavy demands made upon them by incessant labour, the yield appears to increase daily according to the descent, and the supply promises to be illimitable. This mine is being actively and successfully worked under a corporation bearing the name of the Newfoundland Lead Mining Company, and is, in itself, a sufficient example of the almost inexhaustible wealth of Newfoundland, and affords irrefragable proof that one of the most potent inducements for the encouragement of industrial efforts on this important appendage to the British Crown is the immense resource of mineral riches it possesses.

41, Threadneedle-street.

HARRY THOMAS VERRAN,  
Mining Engineer.

## LAKE SUPERIOR COPPER MINING DISTRICT.

SIR.—The year just closed, so far as progress in the development of the metallic wealth of the country relates, has been more than ordinarily successful. Most of the mines have kept up their regular amount of returns, and in some instances important discoveries and advances have been made. But if dividends are the only evidences of the state of a mining region, we have not much to boast of, for the most sanguine do not expect that more than five or six of all the mines on Lake Superior will make a material profit on the year's tonnage. The low and still uncertain price of copper is telling on the industry. Ingots are now quoted at 26 c. per pound, without anything like a fair demand. At these rates, with the comparatively high cost of production, though the mines generally were never in a position to produce more copper, yet only in a very limited number can any profits be realised. Since the commencement of the year several of the mines have reduced their force of miners, with a view to the curtailment of their expenses, a course which more may be expected to follow.

From this county during the past season fourteen mines shipped 3622 tons of minerals, worth (say) 75 per cent., an increase over the previous year of 389 tons. Three mines yielded 2880 tons; and the oldest and deepest (the Cliff) gave 1222 tons, the others ranging from 5 up to 200 tons.

For the coming year the shipments from Lake Superior should be largely in excess of any previous one, the mines on the range of the Calumet conglomerate coming into position as producing mines. Perhaps some of the many readers of the *Mining Journal* were inclined to doubt the statements advanced by me respecting these mines, but I may repeat what I then stated, and say, too, that the Calumet conglomerate, so far as opened, is the "biggest thing" in the copper world: in other words, I believe that this lode, for the length opened on, will produce more copper than any other ever discovered, provided that it holds good in depth. It has been opened on in two mines for over a mile in length, and four or five other companies are exploring for it on adjoining properties, confident of its continuance. Wherever seen it maintains its quality, and is richest at the deepest point attained. A little over a year has passed since the commencement of work on the Calumet Mine, and though only 100 tons of ingot copper has been shipped, there is only one opinion as to its ultimate results. The mine is twelve miles in the bush; new roads had to be constructed, buildings and machinery erected, and all the preparations necessary to mining in such a place overcome. Things are so far in position as to enable them through two openings to take out 100 tons of copper rock per day. The deepest pit,

or shaft, is 50 ft. down from surface; the lode in the bottom 14 ft. wide, worth 20 per cent. for fine copper. For the breaking of rocks as they are taken from the mine there is erected a large steam hammer, of 6 tons weight, having a fall of 9 ft. This, under a full head of steam, is calculated to strike a blow of 80 tons, yet such is the coppery character of some of the rocks, that they have to be struck repeatedly to be broken.

It is expected that the returns from this mine for this month will exceed 200 tons of ingot copper, and in the course of the present season to increase that amount to 500 tons monthly. At present all the rock is being drawn twelve miles to the stamping-mill and smelting-works. Machinery erected on the ground will in a short time render this unnecessary.

Besides the Calumet, the Hecla Mine, adjoining, is coming into notice, for last month (the fourth since they commenced operations) they got out 30 tons of copper. What effect a few such mines as these will have on the copper markets you are better fitted to judge than I am. At the present price of copper the other mines on Lake Superior find it difficult to sustain themselves, but the understanding is that these will make handsome profits at one-half that price. The winter here, so far, has been very mild, snow, until the last week, not standing over 1 ft. deep; since then we have an additional 2 ft. On the lake there is no ice of any consequence. I shall continue these remarks on the first opportunity.

MINER.

Keweenaw County, Michigan, Jan. 14.

## HOW TO TURN THE PRESENT CRISIS TO THE ADVANTAGE OF MINING.

SIR.—In my last I stated my intention to make a few humble suggestions as to what should be the tendency of those reforms, which I consider the recent events show to be absolutely necessary if British mining is to continue to exist, but when I glance at the task which I thereby undertake, I feel my limbs tremble; indeed, the labour seems more than I had bargained for, but I will try, as closely as possible, to embody my views. I have already laid much stress on the suggestion that, in order to effect reforms which can materially affect the economical working of mines, adventurers must, as a class, at once take a more active part in such matters. "Oh!" I hear some one say, "we have our secretaries and purser, our captain, and so on, who should understand these things better than we do, and we leave it to them." Let me ask such an one—"Do you not keep a good bailiff at your farm, or a foreman and clerks at your business? but do you leave it all to them, or do you keep a constant personal supervision over the whole yourself?" Of course. Then be assured that personal supervision—not to a like extent—but on precisely the same principle, is requisite for your mines as well as your farm or business; and until a few active adventurers make it their business to understand a little mining, and look to it, all advice to institute reforms will be so much time lost.

I have alluded to the chief officers in each concern, and this reminds me of an important point—that in a vast number of progressive mines no committee of management exists, and the management is thus left virtually in the hands of the purser and the captain, to play "ducks and drakes" with the concern, or conduct it honestly and well, as the case may be. This is wrong. Purser and captains are but mortal, and it is always wrong to throw temptation in the path of mortals to such a great extent as this system naturally does. It is much to be feared that even where committees do nominally exist, they too often leave things entirely to their officers, or the committee is constituted of persons who are interested in the workings of the mine with merchants' wares. These, then, are well known to be active causes to which they owe their failure and ruin, or a protracted and costly existence long, after they should have been stopped, and would have been had the adventurers understood only a little of what they were about, and not relied too implicitly on the management of their officers. Hundreds, I know, will echo my opinion on this point, and the sums lost from this one defect could be counted by millions. While on the subject of chief officers, I will touch, with as light a hand as I can, on a most terrible cancer, which is but too well known to tear at the very vitals of mine adventure. It has often been alluded to openly in the Journal, "why should I hesitate?" Beyond all doubt it is the custom for chief officers to pocket percentages, and discounts, and premiums on materials supplied by merchants! I need hardly suggest what a rotten and terrible system this is, and how far it acts as a temptation to pass inferior goods, short measure, and to allow far more to be used than the mine actually requires, anyone who views it in a sensible light can judge for himself.

The minority who are above such practices are relieved by their conscience from the weight of my remarks, while those who are guilty may be sure that I am not so unpractical as to condemn them too harshly. True it is wrong, as they know; but, to take a lenient view of it, I consider they are, to some extent, victims of the system of neglect and consequent vice which they have been brought up in, till what is really a most terrible evil has become to be looked upon as a custom. Here, then, is one great and crying evil for reformers to take in hand at once; and, as a first step, let the mining interest take into consideration the question whether chief officers, as a rule, are sufficiently well paid, considering the responsibility and laborious nature of the office, and the social position expected? Are they not too often receiving considerably less wages than the labourers over whom they preside? and is this the way to keep them above all temptation? I consider the question one which should be immediately dealt with. It has often been alluded to, but "what is everybody's business, is nobody's," and nothing has been done. Although I endeavour to condense as much as possible, I find each subject occupies more space than I expected, and I must, therefore, defer allusion to other matters.—Feb. 13.

FREE TRADER.

## ILLUSORY SILVER-LEAD MINING IN WALES.

SIR.—In the interest of all those who are willing to invest in legitimate mining undertakings, I beg to give you the following information in reference to a company whose merits (or rather demerits?) are so strongly advocated in a circular letter which has been extensively issued:—

"We beg respectfully to call your attention to the greatest mineral discovery which has been made for many years, in the \* \* \* Silver-Lead Mine, in Cardiganshire. This important discovery, as already developed, consists of two very rich silver-lead lodes, of the extraordinary width of 13 and 8 feet. These lodes have been opened on for a mile in length, and are found of a uniform richness, of which no adequate idea can be formed unless seen. The adventure is entirely divested of a speculative character. \* \* \* The lodes Nos. 1 and 2 are each capable of producing 2 tons of ore to the fathom, which, when properly dressed and sold, realises 40/- per ton. \* \* \* Before we committed ourselves to this matter, we determined to inspect the \* \* \* Mine, and judge for ourselves, and we found the property the centre of the group of the richest silver-lead mines in the world—having the celebrated Goginan on the south, the Llaisburne Mines on the north, and Cwmystwyth and Wrangoch (*sic!*) on the east; all these, with many others, having paid, or are now paying, very large dividends. After a most careful inspection of the workings underground, and a general survey of the property, we have no hesitation in pronouncing this the richest discovery made for many years. Not, however, to rely on our own judgment (although we have introduced more dividend-paying concerns into London than almost any other firm), we called in the assistance of that eminent mining engineer, \* \* \* of Goginan, and Capt. \* \* \*, whose reports confirm our own estimate of the property, and, in some cases, go greatly beyond it. These valuable and important documents can be seen, with samples of the ore, at our offices. A company of the very highest respectability has been formed, under the name of 'The \* \* \* Silver-Lead Mining Company (Limited)', with a capital of 30,000/-, in shares of 5/- each. Of this amount, nearly 20,000/- is subscribed, and we are authorised to offer the remaining 2000 shares, with 2/- paid, at par. On these shares an interim dividend of 10 per cent. per annum will be paid during the present financial year in July and January next. These accrue from ore already accumulated, and which await machinery to make them marketable; but as soon as the projected powerful machinery is erected and the mine opened, these dividends will progressively increase to 40, 50, and 100 per cent., and the shares command a corresponding price. \* \* \* We are, Sirs, yours faithfully, \* \* \*. Cheques crossed London and Westminister Bank, London, or East London Bank, Cornwall."

Messrs. \* \* \* are, I think, rather bold in stating that "the adventure is entirely divested of a speculative character." I think most mining engineers will hold a very different opinion as regards all metallic mines. Mining of this nature is decidedly speculative; but there is a vast difference between legitimate speculation and reckless gambling for the benefit of promoters and vendors. I have received a letter from an agent of respectability and experience in Cornish and Welsh mining, which sufficiently deals with the assertion that the lodes are worth 2 tons per fathom, and 40/- per ton. The price of the ore last sold by the miners (rejoined) was 12/- per ton, and, as far as my knowledge goes, there never was a ton of ore sold out of the place worth 20/- per ton. The assertion of the value of 40/- per ton is, therefore, a bold statement. [This letter, which can be seen on application, contains a complete refutation of many of the statements set out in the circular.]

To return to the circular: I would call your attention to the price named for tribute—5s. in 1L. To anyone acquainted with the district this statement will appear sufficiently ridiculous. To those unacquainted with it I would say that a very fair price would be 12s. 6d. to 1Ls. in 1L, and this is what mostly rules. Before Messrs. \* \* \* committed themselves to this matter they state that they inspected the \* \* \* Mine. Well, Sir, either Nature must have made some wonderful changes in the geography of the country or the mental condition of the inspectors must have been very uncanny—they say they found the property in the midst of "the richest silver-lead mines in the world, Goginan to the south, the Llaisburne on the north, and Cwmystwyth and Wrangoch on the east." I will leave your readers to judge of the care bestowed upon the inspection by referring them to the Ordnance Map, which shows those celebrated silver-lead mines above named in exactly opposite directions to those pointed out by the inspectors—that is to say, Goginan on the north (not south), Llaisburne on the south (not north), Wrangoch on the south (not east), and Cwmystwyth on the south-east (not east).

The inspectors "have no hesitation in pronouncing this the richest discovery made for many years." I hope and trust that the mining public, who are willing to help legitimate schemes, will exhibit some "hesitation" before throwing away their money, and forget for once that "he who hesitates is lost." The inspectors further state that they did not altogether "rely upon our own judgment, although we have introduced more dividend-paying concerns into London than almost any other firm." I am sure that the mining public would be glad to see Messrs. \* \* \* take their light from under the bushel, and astonish their admiring friends with a list of these dividend-paying concerns. The character of the assistance which they sought out to aid them in their judgment the public will best appreciate when they hear that Captain \* \* \* is identical with Captain \* \* \* named in the extract from the agent's letter referred to.

It is stated that a company of the highest respectability has been formed. I should be glad of some definition of this company, as upon enquiry at the office of Messrs. \* \* \* I am informed that there is no prospectus beyond the circular given above. The only redeeming feature in the whole concern is the pro-

mise of a return (in the shape of a guaranteed dividend) of a portion of the 2L per share which the public are asked to subscribe; but, unfortunately, the amount is confined to 10 per cent. However, after all it is better to lose 90/- than 100/-, looking at the matter from a pleasant point of view. The cause of mining has been sadly injured by kindred concerns to the one under notice. It is very difficult, if not altogether impossible, to get capital for working the most promising mines; and this state of things must long continue, until some check is put upon the cupidity of promoters and vendors, and until mines are fairly and honestly brought before the public with a view to their being legitimately tried and worked. I have no personal interest in bringing this matter under your notice beyond doing the duty of any moderately honest person, in preventing the prostitution of the name of one of our great national sources of wealth and industry, and I am quite certain that, from the information which I have collected in the matter, you will give this letter publication in your valuable Journal, inasmuch as the cause of legitimate mining demands that some public notice should be taken of such cases as the present (and I fear they are very numerous), unless, indeed, the name of "mining speculation" is to be dragged through the mire until all unacquainted practically with its legitimate pursuit are led to shudder at the very name.

Since writing the above, I am informed by the London and Westminster Bank and the East London Bank that they know of no such concern as the \* \* \* Mining Company (Limited), and why the names of these banks are made use of I am at a loss to understand. I should particularly advise those intending to invest or speculate in mines to avoid being misled by the numerous circulars which are issued by interested parties, as the scheme thus endeavoured to be introduced are, generally speaking, such as will not bear scrutiny or open criticism. If the concerns which the originators wish to conceal.

4, Althallow's Chambers, 43, Lombard-street, E.C.

N. M. MAXWELL.

## WELSH SLATE QUARRIES.

SIR.—How is it that the investing public do not pay more attention than they do to the working of such tracts on the Bangor and Festiniog great veins as, with proper management, cannot fail to pay handsome dividends on the capital employed? I have recently been in North Wales, and find that properties are there lying idle, chiefly through bad management, which would long ere this, had the capital sunk in them been judiciously expended, have become highly remunerative. I find there, as in other places, that it is one thing to get hold of a valuable grant of slate-bearing rock, and another to get it out the right way—so that for want of competent managers hundreds of thousands of pounds have been thrown away upon valuable properties, still lying idle, or nearly so; whereas, had the management been right (not by a board of directors, who, in nine cases out of ten, know nothing of the practical management of a quarry), as it should be, under a thoroughly competent agent, most of the slate quarries of Wales would have been the best possible investments. I have no interest in any Welsh slate quarry, so I make these remarks disinterestedly, and I believe what I say cannot be contradicted; but, as I have already stated, good properties may still be obtained, which, provided they are efficiently managed, will yield a profit of from 15 to 20 per cent. on the capital required to work them.

LEX.

## WHEAL BULLER, AND ITS MANAGEMENT.

SIR.—What a pity it is that the agents of our mines are not more confidential. More than two years since I was told by a Redruth man that our mine wanted another engine, and that without it we were worse than folly to keep the mine at work. Believing that the object was to get from me my shares I refused to sell. I was convinced I acted right, because I said to myself that if such a thing as an engine were required our captain would tell us of it, and we should have it. It seems to me that the truth is now oozing out. It is now allowed by our agents that our engine is at the extent of power, and that to do our mine justice a 60-in. or 70-in. engine should be at once erected. If so, what a pity it is that we should be throwing our money away on the flat-rods, the expense of which would contribute towards an engine at a time when engines can be had for a nominal sum almost. If our mine were a bad one I could understand the agents putting up flat-rods, for I should say they wanted to keep the mine on a little longer, in order to keep their salaries as long as possible; but they tell us we have a good and lasting mine before us—therefore, to me, their conduct appears incomprehensible.

COMMON SENSE.

## CORNISH MINING—IMPROVED PROSPECTS.

SIR.—After the great depression in the prices of tin and copper, there is at last some prospect of brighter days, looming at no great distance. It is sincerely to be hoped. Having been an adventurer in mines during the last 30 years, I have never recollect so much distress as during the past year. The great year of commercial insanity, 1852, was not so severely felt as the year 1856 by the mining population of Devon and Cornwall. Tin and copper dropping, the latter from 145/- standard to a little above 90/- for copper, and tin from 90/- per ton to above 43/-, must have caused many valuable properties to become losing, instead of profitable, concerns; and it would have been well for the metal trade, as regards the profit in working mines, if half the mines in Devon and Cornwall had suspended operations for a time, instead of making constant calls on the shareholders, many of whom having had to pay calls on every nine mines out of ten they happened to be holders in, and caused persons to sell their good stock to upon the calling. Many of these old and deep mines warrant little or no prospect of ever paying anything back to the shareholders, from the exhausted state of such old and worn-out mines, and heavy expences incurred in working them. Nothing offers better prospects of success, it is my firm belief from experience, to the capitalists than mining property on the whole, and a good mine beats every other enterprise, but great caution is necessary in the selection of such investments.—Feb. 13.

JOHN A. STEPHENS.

## CORNISH MINING—MERCHANTS' BILLS.

SIR.—I regret to find that there are not more persons embarked in Cornish mines of the same way of thinking as "Free-Trader," of last week.

## Meetings of Mining Companies.

## WHEAL KITTY (ST. AGNES) MINING COMPANY.

A general meeting of shareholders was held at the offices, Austin-friars, on Thursday.—Mr. T. REECE in the chair.

Mr. E. KING (the secretary) read the notice convening the meeting, and the minutes of the last were approved.

The accounts showed a credit balance of 6987. 4s. 9d. The report of the agents was read as follows:—

**Feb. 13.**—In the S2, driving west of Holgate's shaft, the lode is producing saving work for tin.—**Fryer's Lode:** In the new shaft, sinking under the 65, the lode has fallen off in value very much in the last 6 feet sinking, now yielding saving work for tin, but we hope this is only temporary, and from the shoots of tin driven through in the 65 west we believe the lode will again improve to its former value. In the 65, driving west of shaft, the lode has been disordered for some time, but is now becoming more settled, and we think the main part of the lode is to the south; in that direction we are driving; at present the end is producing saving work for tin. In the 65, driving east of shaft, the lode is unproductive. In the 54, driving west of shaft, the lode is worth for tin 7s. per fathom. The 54 east is suspended for the present. In the winze sinking under the 44 the lode is worth for tin 15s. per fm.; we are laying open a good piece of ground in this winze. In the 44 west, which is for the present suspended owing to the sinking of the above winze, the lode is worth from 15s. to 20s. per fathom. In the 44, driving east of shaft, the lode is more promising in appearance, and worth for tin 4s. per fm.—**Votile Lode:** In the 44, driving west of cross-cut, the lode is small and poor at present; in this we have been greatly deceived, as we really expected, from the indications presented when we first cut the lode, that would have improved, and we are not without hope even now, and trust that during the ensuing quarter our expectations will be realised. In the 24, driving west of cross-cut, the lode is unproductive, and the same remarks will apply to this as above. In the 24, driving east of cross-cut, the lode is worth for tin and copper 4s. per fm., with a kindly appearance. The tutwork bargains are not quite so good as at the last meeting, but we are not discouraged, as we hope, when the new shaft is down to the 24, and driving east and west is commenced, that good improvements will take place. We shall continue to raise our usual quantity of tin—about 50 tons per quarter, which, with an increased price, as there is every probability of at present, will enable us to give a good profit.—**WILLIAM TEAGUE, WILLIAM POLKINGHORNE, STEPHEN DAVEY.**

The CHAIRMAN moved that the report be received and entered on the minutes, and that the accounts be passed and allowed. The report generally could not be considered satisfactory, more particularly that part in which the manager, Capt. Teague, referred to the keeping up the returns at upwards of 50 tons of tin per quarter.—Mr. KING drew attention to the fact that—as appeared in the balance-sheet—the first parcel of tin sold during the past quarter realised only 46s. per ton. He trusted, however, that at the next meeting the balance-sheet would show that the quarter's returns of 50 tons had realised something like 5s. per ton more, which would give them 250s. more upon the quantity sold.

Mr. ALISON thought, from the general character of the report, the shareholders had ground, for hoping that some considerable improvements would take place in the mine during the current three months; and this, added to the fact that it seemed more than probable the price of tin would advance, justified those interested in looking forward to a more encouraging future.

Mr. DAVEY said that a rise in the price of tin of something like 47. or 5s. per ton would bring ground into profitable operation that would not now pay for working.—The motion for receiving the report and ordering it to be entered on the minutes, and passing and allowing the accounts, was put and carried unanimously.

The CHAIRMAN said, as a member of the committee, he had examined the accounts, and although the committee always gave every consideration to the recommendations of the manager, yet they thought that the more prudent course upon the present occasion was to declare a dividend of 2s. per share.

Mr. KING read a letter from the manager, in which he suggested a dividend of 2s. 6d.—Mr. LITTLE thought the manager suggested a dividend of 2s. 6d., the committee might safely adopt the recommendation.—Mr. KING said it was a matter entirely for the shareholders to decide—in them was vested the power to determine upon the amount of dividend. After the payment of a dividend of 2s. per share, there would remain an undivided balance of about 300s.

After some further discussion, upon the proposition of Mr. CHESTON, seconded by Mr. WELDER, a dividend of 2s. per share was unanimously agreed to.

A vote of thanks to the Chairman terminated the proceedings.

## PRINCE OF WALES MINING COMPANY.

A general meeting of shareholders was held at the offices of the company, St. Michael's House, on Tuesday.

Mr. J. Y. WATSON, F.G.S., in the chair.

Mr. JEHU HITCHINS (the secretary) read the notice convening the meeting, and the minutes of the last were approved.

A statement of accounts was submitted, which showed a cash balance of 1337. 8s. 6d. The liabilities exceeded the assets by 6247. 12s. 11d., debiting the estimated costs for the next three months, and not crediting the returns for the same period. The report of the agents was read, as follows:—

**Feb. 9.**—Since the last general meeting the 55 fathom level cross-cut north has been driven 4 fms. 5 ft., being now 5 fms. 2 ft. from shaft; the ground being favourable for driving and very congenial for copper ore. The 55 cross-cut south has been driven 5 fms. 4 ft., being now 6 fms. 2 ft. from shaft; the lode intersected and cut through 7 ft. wide, with 4 ft. driven east and 3 ft. west on its course, worth 35s. per fathom in each end—a strong masterly lode. The 45 west has been driven 5 fms., being now 5 fms. 3 ft. west of the cross-course, the last 2 fms. being driven by the side of the lode; when last taken down it was full 3 ft. wide, yielding good stones of copper ore, although not rich; we have every reason to expect an improvement here shortly. The 45 east has been driven 11 fms. 3 ft., being now full 32 fms. 3 ft. east of cross-cut; the lode in the present end is 2 ft. wide, worth 20s. per fathom; here we are daily expecting an improvement: this level for its whole length east of cross-cut has been worth 30s. per fathom. The stopes in back of the 45 east are worth full 25s. per fathom. In the bottom of this level we have commenced a winze 9 fms. east of cross-cut, which is down 7 ft.; lode 3 ft. wide, worth 40s. per fathom. We have communicated the rise in back of the 45 east with the winze in bottom of the 30, which has improved the ventilation throughout the mine. The 30 fm. level east has been driven 2 fms. by the side of the copper lode. The 30 fm. level east has been driven 4 fms.: in consequence of this end being so far in advance of the 45 west, and the air bad, we thought it advisable to suspend it for the time. We have two parcels of ore on the quay to sample on Monday next—above 90 tons; the computed weight you shall have on Tuesday in due time for the meeting, and have now 30 tons broken on the mine; and from present appearances we hope to sample 100 tons by the end of March. In conclusion, we beg to state that the mine throughout has very much improved since the last meeting.—J. GIFFORD, W. GIFFORD.

The CHAIRMAN moved that the report be received and entered on the minutes, and that the accounts be passed and allowed. As far as the report was concerned, that spoke for itself as to the progressive value of the mine; but after all, the most substantial evidence of its value was the extent and character of the returns it made. When he informed his fellow-shareholders—which he did with much pleasure—that the ore sampled that day amounted to 99 tons, of which 52 tons yielded a produce of 10s. 4d. and 47 tons 5s., he thought there could not be a divided opinion as to the intrinsic value of the mine. They knew by results that the agent's computations were always below the actual values, but even according to his estimates the different points of operation were at present of no less value than 15s. per fathom (hearing); and, furthermore, he promised that in March the sampling would amount to 100 tons, in which case the mine would be working at a good profit. (Hearing, hearing.) By the accounts submitted, the shareholders saw that there was a cash balance in hand amounting to 1337. 8s. 6d., but in order to place the mine in a thoroughly sound financial position, the committee had estimated the costs for the next three months; debiting the accounts with the amount, and without crediting the returns for the same period, they compute that at the next general meeting the liabilities will exceed the assets by 6247. 12s. 11d. A call of 1s. per share, which was the amount the committee recommended, would produce 640s.; so that if that recommendation were adopted by the meeting, the committee would be enabled to carry on the operations to the best possible advantage; and knowing, as they did, that the company possessed a really valuable property, they were determined that, with the support of the shareholders, it should not be starved—to use a familiar expression—but that it should be developed in a manner compatible with its proved resources. (Hear, hear.)

Mr. LOOKER, while admiring the policy of the committee, was inclined to think something like an estimate as to the value of the returns during the current quarter should have been placed against the estimated costs for that period with which the accounts had been debited.—The CHAIRMAN said that by adopting the recommendation of the committee the company would be placed in a sound financial position, the benefit of which would be seen at the next meeting. It should be borne in mind that actual cash was not received until six weeks after the ore was sold.—A SHAREHOLDER certainly thought the estimated value of the ore to be sampled next month should be included.

The CHAIRMAN said the best reply he could make was to repeat what he had just stated—that, having a good mine, let them develop it as its merits deserved. (Hear, hear.) He might mention, however, that in addition to the 99 tons of ore sampled that day there were 30 tons more at surface, the cost of producing which had been paid for. If that had been reckoned, the accounts would have shown that no call would be required.

Mr. LOOKER had not made the remarks he had done with the view of superseding the making of a call, but, at the same time, the position of the company was really much better than was indicated by the accounts.—Mr. RICE considered the committee had acted most prudently in not taking into account the ore that might be sampled at the end of March, for before that time the whole mine might be swallowed up by an earthquake, or something else. (Laughter.)

Mr. JEHU HITCHINS reminded Mr. Rice that if such an event were to take place the shareholders would save the costs. (Renewed laughter.)

The CHAIRMAN said that committees of management were generally found fault with because they made things too pleasant, but in this case the committee was complained of because things were not made pleasant enough. (Hear, hear.)

Mr. C. A. FOWELL said the best test of the value of the mine was, after all (as the Chairman had said), the returns of ore. He considered the committee had acted most wisely in not estimating the value of the returns, for there was always an objection to such a course.

A SHAREHOLDER enquired if the sampling just made was not in excess of the amount estimated by the agent?—The CHAIRMAN replied in the affirmative, stating that it was estimated at 70, whereas it actually amounted to 99 tons.

Mr. JEHU HITCHINS, in reply to a question, stated that the 55 fm. level cross-cut north had been driven 5 fms. 2 ft., and, to quote the words of the report, "the ground is favourable for driving, and very congenial for copper ore." The cutting of the north lode was a point of the utmost importance.

Mr. BOSWELL remarked that the two lodes were something like 12 fathoms

apart. If the north lode were cut good, the value of the mine would be immensely enhanced, if for no other reason than that they would be, as it were, working two mines at the cost of only one.—The CHAIRMAN said the shareholders possessed a good mine in the one lode that had been cut.

Mr. JEHU HITCHINS drew attention to one important feature which had apparently not been observed by the shareholders. He referred to the winze from the 45, which was being sunk before the 55 end, going east. The lode in that winze was the richest point in the mine. It should be remembered that when the lode was first cut at the 45 it was worth about 20s. per fathom, but going eastward it increased in value to 35s. In the bottom of the 55 end the lode was valued at 35s. per fathom, but the quantities of ore returned considerably exceeded the estimates, which spoke volumes, showing, as it did, that the mine was really better than represented. As he had already said, the fact that the lode in the 45 winze was the richest point yet seen in the mine was a feature of importance of which could not be over-estimated.

The CHAIRMAN said the shareholders should not be unmindful of the fact that east of the shaft a course of ore had been gone through for 32 fms. long, worth on an average 30s. per fathom, and that the 45 east was being driven by six men, at 5s. per fathom.—A SHAREHOLDER asked if the whole of the lode was being carried?—Mr. GOMPERS had had a report, dated yesterday, stating that the part being carried was 6 ft. wide. He had received a report to that effect.

The report, at the request of the meeting, was read. It was as follows:—

**Feb. 11.**—Agreeably to your request, I have this day inscribed the above-named mine, and the following is my report thereon:—In the 55 east and west, the part of lode being carried is full 6 ft. wide, with a part standing to the south not yet cut through; the two ends are a good course of copper ore; the part carried in each end is worth full 35s. per fm. I am of opinion the eastern end will greatly improve, by its general appearance. In the 45 west, the drivage continued on the north side of the main part of the lode, the ground by the side is highly mineralised; I am of opinion the lode will be found productive when taken down. In the 45 east the lode is exceedingly promising, particularly in the bottom of the end; the end will produce full from 20s. to 25s. worth of rich copper ore per fathom. In the stope in back of the 45, east of cross-cut, the lode is a good course of ore, worth full from 30s. to 40s. for rich copper ore per fathom. In conclusion, I beg to say I never saw the mine looking anything equal to the present. As the 55 progresses east towards the winze sinking below the 45, there is every reason to look forward to a great improvement in the 55. The 45, east of cross-cut, is extended over 35 fathoms in a course of rich ore, particular in the bottom of the end. I consider the mine to be a prize.—J. GOLDSWORTHY.

The motion adopting the report and passing the accounts was put and carried unanimously. A call of 1s. per share was made.

A vote of thanks to the Chairman terminated the proceedings.

## EAST PROVIDENCE MINING COMPANY.

A quarterly meeting of shareholders was held on the mine on Feb. 6, 1867. Mr. R. H. BAMFIELD, of St. Ives, the Chairman of the managing committee, in the chair.

A goodly number of local shareholders were present.

Mr. T. HOLLOW (the purser) congratulated the shareholders on the improved prospects of the mine, and said never before was East Providence looking better, as would be shown by the agents' report. Although tin had not been raised in the quantities they anticipated, a good deal was at the surface, which could not be returned, owing to unfavourable weather, and this would be available another quarter. He had also to congratulate the proprietors on the further rise in the price of tin announced that morning, and on the prospect of further advances, which not only increased the value of their property, and inspired them with fresh hope, but now appreciably added to the value of every ton of ore produced. Of 24,000t., now expended on the development and working of this mine, they were only about 100t. in arrear, a fact which was not only satisfactory to himself, but must be gratifying to the shareholders.

The following accounts were then submitted:—Balance from last quarter, 1671. 7s. 5d.; labour cost, Sept., Oct., and Nov., 8861. 19s. 2d.; doctor's pence and stationery, 91. 16s. 9d.; merchants' bills, 2991. 0s. 8d.—13151. 4s. By call of 1s. 6d. per share (less 7s. 7s. 3d. discounts), 2917. 0s. 9d.; tin sold (12 tons 13 cwt.), 6361. 5s. 7d.; leaving a debit balance of 3871. 17s. 8d.

A call of 2s. per share was made.

Several questions were put to Capt. Nancarrow as to the state of the mine, and his answers, summarised, were that he never had a better opinion of East Providence than at the present time.

Votes of thanks were tendered the purser and the committee. The latter were re-elected. On their behalf, Mr. BAMFIELD returned thanks, and said whether as a committee-man, or simply as a shareholder, he would continue to interest himself in the welfare of East Providence. He had carefully gone through the accounts, and was perfectly satisfied with them, as also with the prospects of the mine.

## GREAT NORTH DOWNS MINING COMPANY.

A general meeting of shareholders was held at the offices, Austin-friars, yesterday, Mr. PINNER in the chair.

Mr. EDWARD KING (the secretary) read the notice convening the meeting, and the minutes of the last were approved.

A statement of accounts (made up to the end of December) was submitted, which showed a debit balance of 39531. 16s. 8d.

The report of the agents was read, as follows:—

**Feb. 14.**—Since your last general meeting we have fixed pitwork complete at Sieggen's, set the 70-inch engine to work, and sunk the shaft 4 fms. 4 s. in., through a lode worth fully 30s. per fathom for copper, and about 20s. per fathom for tin. We are leaving a fine course of ore in the ends of the shaft, which can be taken away to better advantage when we get deeper. This shaft is now 10 fms. 4 ft. 6 in. below the 70. We purpose sinking 5 fathoms more before we commence to drive, so as to make the levels at King's and Sieggen's of equal depth. We would here observe King's shaft is 60 fathoms east of Sieggen's, and is already sunk to the 86, and a level started west towards Sieggen's, which is extended 7 fms. 3 ft. 6 in.; the lode has greatly improved in the last 6 ft., now worth 15s. per fathom; cost of driving, 4s. per fathom. A winze in the bottom of the 75, west of King's, is sunk 6 fms., 5 ft. 3 in.; the lode is worth 10s. per fm. No. 2 winze, 30 fms. west of Sieggen's shaft, is down 8 fms., 5 ft. below the 70; the lode in the deepest point is very easy for working, and of the most promising character, worth 15s. per fathom. No. 3 winze, nearly 70 fathoms west of Sieggen's, is sunk 2 fms., 3 ft. through beautiful porous lode, worth 14s. per fm. The 70 fm. level end is extended west of Sieggen's shaft 73 fms. 2 ft. 6 in.; the lode has recently improved, now worth fully 15s. per fathom. We have some 60 fathoms further to reach Butler's shaft; six men are engaged driving a cross-cut south from the bottom of Butler's to intersect the main part of Sieggen's lode. We have intersected the capel, or hard part of the lode in the cross-cut, but we consider the ore-bearing portion still further south. We have good spots of ore, and other indications by which we may reasonably infer we shall find the lode more productive when fully cut through. As soon as the main part is reached we shall urge on a drayage to meet the level west from Sieggen's, and thereby open up a communication between Butler's and Sieggen's shaft, which will thoroughly ventilate the mine, and greatly facilitate the operations. The 70, on the north lode, has been extended west of the cross-cut 3 fathoms. This is a distinct lode from Sieggen's, and is 2½ ft. wide, carrying good spots of ore. The water issuing from the end contains a great deal of copper in solution; we, therefore, hope to have an improvement by extending on to it. We shall sell shortly 155 tons of copper ore; the greater part of this is adventurers' property—that is, ore which has been raised chiefly in sinking Sieggen's shaft, the produce of the 70 fathom level end west, and the winze already mentioned. We are pleased to state the mine is opening up well in depth, looking at the improvement in the 86, west of King's shaft. The ore in the 70 fathom level end, west of Sieggen's, a distance of 130 fathoms, and the sinking of Sieggen's shaft, and the winzes referred to in the intermediate ground, goes to prove, almost to a certainty, that as soon as we can set off drivages in the 86, from Sieggen's shaft (probably in two or three months), we shall open up valuable reserves of copper ore. The width, character, and composition of Sieggen's lode, and the south lodes, inclining towards it in depth, are very favourable indications for making deep and profitable mining property. We are well provided with pumping-power to thoroughly drain the mine to a good depth.—W. RICH, C. BAWDEN.

The CHAIRMAN having moved that the report be received and entered on the minutes, and that the accounts be passed and allowed, stated that the balance-sheet before the meeting comprised a period of six months, which brought up the accounts to the end of December. Perhaps the best way of estimating the progress that had been made would be to revert to the position of the mine twelve months since. At that period the balance-sheet embraced the costs to the end of October, but by deferring the holding of the present meeting a few days later than the corresponding meeting last year, the committee had been able to include the December cost; in other words, the accounts had been charged up as closely as they possibly could be. At this time last year a call was made, which paid off nearly the whole of the debit balance. Since then two calls had been made of 10s. each, and now there was a debit balance of 39531. 16s. 8d. The expenditure altogether had amounted to about 8800t., which was spread over a period of 14 months. Out of that amount the 70 fathom cylinder-engine had been paid for, a whim-engine, pit-work, &c. Sieggen's shaft had been cut down from surface into an engine-shaft, which had been sunk on the course of the lode some 4 or 5 fathoms, and the 70 fathom level driven something like 40 fathoms. Looking at the work executed and the results achieved, he thought the shareholders would agree with him that the expenditure was very moderate. As to the future, it would be proposed to make a call sufficient to liquidate the debit balance; and as far as could be seen there were reasonable expectations than in a few months good profits would be realised. Looking at the difficulties of the past year, shareholders might fairly congratulate themselves upon the fact that the arrears of call amounted to only 447. He need hardly say that Wheal Rose was their pioneer mine, where the lode had continued to improve down to the 100 fathom level, the deepest point at Great North Downs being 86 fathoms

away. We have repaired the wheels and crushing-mill, also the dressing-floors, and put down tram-road through the surface cross-cut to dressing-floors, &c. We have from 5 to 6 tons of lead ore clean and ready for market, independent of the tributaries' bargain. At this time the weather is so severe that we cannot do anything at surface. For the future I would recommend sinking the engine-shaft 10 fms. deeper to a 40 fm. level, and then drive levels under the ground already discovered; should it improve, as I have every reason to believe it will, we should have a fine piece of ore ground for 25 fms. in length that could be taken away at about one-half profit to the company. I would also recommend as soon as convenient the driving of the 30 fm. level east, as it is my opinion there are fair chances of good returns of ore for the future in opening ground in that direction. I shall be in a better position what to advise or what to recommend doing our Bennett's lode in a short time after the lode is taken down in the winze now sinking.

Mr. MATTHEW FRANCIS proceeded to explain to the meeting the various points of the workings enumerated in the report, and their probable results, from three planes of the mine. He pointed out the necessity of driving on the 30 fm. level (the bottom level eastward) as rapidly as possible; as this level is approaching the junction of Bennett's with the main lode, and under the influence of this junction he thought that rich ore ground would be formed on one, if not both, of the lodes, as it had been in the workings above, where the main vein yielded as much as 4 tons to the fathom. This would immediately put the mine into a very good state of profit; in fact, more than half of the gross ore money would be net gain. The junction could not be more than 25 fms. before the end, as seen in the section. He also advised the immediate sinking of the engine-shaft, to cut out and drain a new portion of ore ground, and provide for a regular supply of ore for the market in future; and suggested, when the tributaries had exhausted the back of the 30 fm. level (the present bottom level) to place them to sink a winze in the bottom of the 30 fm. level, some 15 fms. east of the engine-shaft, in the best ore, in order to ventilate the new section of ore between the 30 and 40 fm. levels, and to keep up the returns. He considered these the most important points connected with the future prosperity of the work, and thinks they'll quickly lead to very satisfactory results for the company. He also explained that the works of trial during last year had led to the discovery of Bennett's lode, a lode likely to add much to the value of the mine, and to elucidate the line of future operations, so as to show with certainty what must be done, and that the general results achieved by the year's work were most valuable and encouraging to the shareholders. He said, in answer to one of the spectators, that he thought any money now required for the mining purposes in view would soon be returned to the investors with great interest, and that the value of the mine could not fail to be much enhanced during the year, and that, probably, the driving of the 30 fm. level east would soon land the company in a state of great profits. He thought further that all the work done reflected credit on the management, which he considered very economical in comparison with the other mines in the county, now so very prosperous; and he also, in conclusion, called attention to the great permanency and gains of the Cardiganshire Mines, and expressed an opinion that the Gothic Mine would soon be classed amongst the best mines in the district.

It was then moved and seconded, and carried unanimously, "That the report of the directors and the accounts be adopted."

A long discussion then followed on the several matters contained in the reports, and on the present and future of the mine, at the close of which the shareholders present expressed their convictions that the workings underground should proceed with without delay, and their readiness to increase their investment in the company.

The directors acknowledge with thanks the confidence placed in their management by the unanimous adoption of the report and accounts submitted for the year 1866. They cannot condescend to ban the proprietary for more capital, but must impress on each member that dividends now depend on profits, and profits can be made permanent, and, probably, largely increased in proportion as the mine is deepened. This has been fully confirmed by the statements made by Mr. Matthew Francis to the meeting, and by the report of the agent at the mine. The directors hope that each subscriber, for his own interest sake, will accept a further number of shares, in proportion to his present holding. A deposit of 10s. per share must be paid on application, and the remaining 2l. per share can be paid at the convenience of any shareholder, on or before the 30th of April next, and all sums to be made payable in the name of the managing directors. Provided the operations recommended are at once proceeded with, a dividend of at least 10 per cent. may be anticipated for the current year.

The following interesting letter, received by post during the meeting from the agent of the interesting mine, was read:—

Feb. 7.—The winze sinking on Bennett's lode is now down below the surface cross-cut 5 fathoms; the lode is about 1½ foot wide, composed principally of cassiterite, with a little lead ore—now sinking by four men. We have two men taking down a piece of lode standing on the south side, near the end of the level west of the cross-cut, on Bennett's lode, which is yielding very fine stones of ore; I intend them to take it down to the present end before setting again. The cross-cut south from the 25 is now driving by two men. Within the last few days we have cut into some branches of spar; I am of opinion they are the forerunners of a lode near at hand. The south lode in the 25, driving east, by two men; at times this lode has a very good appearance for making ore, but so far it has not yielded sufficient to save for dressing. The six men continue on, as for the past two months, in back of the 30, east of engine-shaft, on tribute, at 7s. per ton; I calculate they have about 9 tons of ore broken, but in consequence of the weather for the past month they have not been able to draw their stuff. The water at this time is in fork, and we intend to draw all they have broken, and make it ready for market. As soon as this is done I will, as you desire, put six men to cut plat, put in penthouse, &c., ready for sinking the engine-shaft 10 fms. below the 30; I am of opinion it will be better to set, and to do so in one bargain. The ore ground in bottom of the 30 is about 25 fms. long, and will on an average yield 10 cwt. of ore per fathom. By sinking the engine-shaft 10 fathoms deeper, and opening east in a 40 fm. level, we shall lay open a fine piece of profitable ground that would yield about 130 tons of lead ore. The opinion of agents in general is that the ore will be found much better as we get deeper.—JAMES LESTER.

#### [ADVERTISEMENTS.]

From Mr. EDWARD COOKE:—Having visited Cornwall during the past week, I must defer making any remarks upon the state of the Mining Market, but will notice a few mines that I have recently visited. Beginning with WEST CARADON: although no rich discovery of ore has yet been made at the several points of operation, still the prospects of important discoveries are highly favourable. It may not be generally known that the ground upon which operations are now about to be commenced is upon the run of the several lodes that have already given about 100,000l. in profits, and is entirely in whole or unbroken ground, and as a speculation is worth as much as the whole of the mine and its plant is selling at in the market. A new shaft is about being sunk on one of the lodes that have already given large profits, and although only as yet seen a few fathoms from surface, shows strong indications of being productive in depth. In the part of the mine in which this lode has already been worked the lodes have been found productive at less than 20 fathoms deep; I do not wish it to be understood that it is absolutely a certainty of this lode being productive at the same depth, although there are great probabilities that such will be the case. In the meantime, there are yet large quantities of copper ore in the old part of the mine, that will greatly assist the development of the new part in question. The cutting of a good course of ore in this new shaft (and the chances of doing so are very good) would cause a rise of 10s. or 20s. per share—James Lester.

From Mr. ALBERT E. PRINCE (Penru, Camborne):—We cannot by any means report of an improvement in the Cornish market, and, as will be seen by the price list which accompanies this communication, shares generally are comparatively low. During the week several mine meetings have been held, amongst which are West Seton, Prince of Wales, Dolcoath, and Wheal Seton. At the former mine a dividend of 1000l. (2l. 10s. per share) was declared, with a credit balance of 500l. 14s. carried forward. This is now one of our richest copper-mines, and as there are but few who feel disposed to part with their shares, we need say but little on the present occasion, as to the report—which has ere this reported the respective shareholders—speaks for itself. The accounts at Prince of Wales showed a cash balance of 133l. 8s. 6d. The liabilities exceeded the assets (providing for the costs for the next three months, and not crediting the returns) by 624l. 12s. 11d.; 90 tons of ore have been sampled, of which 52 tons were of 10s. and 47 of 9s. produce, equal from 7s. to 7s. 10s. per ton. At Dolcoath a dividend of 1074l. (3s. per share) was made: report favourable. Wheal Seton declared a dividend of 1386l. (3s. 10s. per share, about 20 per cent.) The report presented showed that the mine had fallen off to no small extent. NORTH CROFTY shares have again been in favourable request, and done at better rates, but up to the settling are slightly lower, consequent on the inability of parties to take them up. At no period has the mine looked so well, and the facility with which the very rich tin-stuff can be dressed helps to contrast it most favourably with the majority of even our rich tin mines, as it is well known the ordinary dressing of this metal is both tedious and costly process. The water having been in for a considerable time, many shareholders have looked forward with some apprehension to the next meeting, but we gather that the managers have it in their power to produce a pleasant surprise. Next week we shall, amongst others, refer to Prosper United, East Wheal Lovell and Trumpet Consols (the adjoining mine), though quiet now, will, at the meetings ensuing, be both in a position to declare good dividends. Annexed are the prices:—Camborne, 21s. to 23s.; Cook's Kitchen, 10s. to 11s.; Chiverton Moor, 6s. to 8s.; Chiverton, 8s. to 9s.; Clifford, 6s. to 6s.; Drake Walls, 1 to 1½; East Lovell, 9s. to 10s.; East Carn Brea, 3 to 3½; East Grenville, 1½ to 2½; East Russell, 3½ to 3¾; East Rosewarne, 3 to 3½; Great Wheal Vor, 16s. to 17s.; Great South Tolgus, 3½ to 4½; Great North Downs, 3½ to 3¾; Marke Valley, 4 to 4½; North Croft, 5 to 5½; North Roskar, 10½ to 11; Prosper United, 3 to 3½; Prince of Wales, 33s. to 35s.; Providence, 26 to 28; Tincoff, 13s. to 14½; West Chiverton, 6s. to 6½; Wheat Buller, 25 to 27; Wheal Seton, 100 to 10s. ex div.; Wheal Basset, 6s to 7s; Wheal Uny, 2 to 2½.

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ridges of a very satisfactory character. There are in North Croft the principal elements that constitute great and lasting productive mines, and as such I recommend it as an investment.

My visit extended to WEST SETON and WHEAL SETON. Both of these mines, at their present respective market prices, are safe for dividends at the rate of 12½ to 15 per cent. for a long time to come. WEST CHIVERTON still continues to return large quantities of lead, and to yield profits to the shareholders at the rate of about 15 per cent. per annum at the current price of the shares, with every prospect of a permanency. Other mines in this rich district are progressing well. NEW CHIVERTON, for instance, promises to repay the spiced adventures of their outlay in the mine. A very good discovery of lead has been met with only about 15 fms. from the surface. I saw some very fine ground from this discovery, and the lode is valued at 20s. per fair fathoms of ground. NEW Chiverton Mine is immediately adjoining to North Chiverton Mine, and this lodes runs in a direction through the last-named property. I mentioned last week my regret at the suspension of this mine just at the period when it had reached the point for which the mine was commenced. It has now been bought by a gentleman well known as one of the most successful and enterprising men engaged in mining pursuits. Whether he intends to work it himself or in conjunction with his friends I am unable to say, but that success will attend a further development of North Chiverton I entertain no doubt whatever, and I advise my readers, in the event of its being brought out as a public company, to secure some shares in the mine. Next week I hope to make a few remarks upon some other mines that came under my notice in the course of my peregrinations in Cornwall.

FROM MR. JAMES CROFTS:—The following is gossip from the Calstock district—OKEF TOR (in 12,288 shares—nearly 30,000, expended): "I was down in Okef Tor on Tuesday; such a splendid sight I never saw, and I was told by four or five different captains it was many years since such a discovery was made. My selling price is 2l.; I had 11, 11s. 3d. offered in Tavistock for 200 shares. GAWTON is looking well, also CALSTOCK CONSOLS; I think the district is coming out again. I forgot to say the lodes in the 50 and 65 in Okef Tor are 4 to 6 fms. wide, grey throughout. I was told by one of the captains who went down that the lode in the 50 was more like 20 tons per fm., than 8 tons, as stated. I tell you this for your guidance."

EAST RUSSELL: There is an enquiry of a speculative character, and a considerable business is doing in these shares, which are still moderate in price, compared with the work that has been in progress for the last ten years. Little short of 50,000l. has been spent on this mine, and during the period in question the shares have varied in value from 10s. to upwards of 40s. per share. The writer attended the meeting of PRINCE OF WALES, which was remarkable for its unanimity and highly satisfactory character. The insignificant sum of 1s. per share was voted—not, however, without a suggestion from one shareholder that as there was one raised and not brought into the account, no call was absolutely necessary. According to the report presented, the cost and stopes in the mine were valued, in the aggregate, at 1550t. per fathom. To-day a telegram rates this quantity to 290t., being an increase of 14s.; and as 99 tons of ore were sampled, valued at 60s., instead of 80 tons, promised, they must be very sceptical as to the success of this mine. Should they not rather consider it as a grand prize in the lottery of mining? There are too many eyes upon it for the public to be long deceived as to its value, and, therefore, it is predicted that "bears" of the shares will "burn their fingers," which prediction can only be stabilized by some violent change in the character of the lodes, at present not anticipated. The price of shares to-day (Thursday) is 36s., but an advance, to all appearance, inevitable.

The public should watch the fluctuations in the price of tin and copper, as much depends on this as upon an advance or decline in the metal markets. The late flat period has again depressed the price of shares, but increased the susceptibility of a large number to advance in value. GREAT SOUTH TOLGUS MINE is embarrassed at the moment by a platitude of water, arising chiefly from the melting of the snow over a large surface, and for which this and neighbouring mines have become temporarily a sort of reservoir. A week or ten days may see the mine again dry, when the shares will be worth much more than their present price of 12s. 6d. to 15s. At the meeting of WHEAL KITTY (St. Agnes) a dividend of 2s. per share was declared.

From Mr. JOHN B. REYNOLDS (Bishopsgate-street Within).—The markets exhibit a healthy appearance, and mining matters generally command more attention than for some time past. It is confidently predicted that tin will have a further considerable advance, and there seems to be very excellent reasons for such anticipations. Small shares are in fashion. Many persons appear to be in favour of "little risks." Nevertheless, good shares, notwithstanding the prices run high, are appreciated, and it must not be forgotten that there are some "small shares," or rather very low-priced ones, "dear at a gift." There are some "very low-priced shares," truly, which are very cheap, and some in the writer's estimation, extremely desirable for investment. The writer's "Circular" for February and March will disclose his views fully; and, whilst your correspondent deprecates the value of no property, he confesses his predilection in favour of certain mines. The accounts of NORTH CROFTY are very satisfactory, and EAST LOVELL is reported as being in an excellent position. WEST ST. IVES (in 6000 shares) I have had inspected for my own satisfaction by Capt. James Pope, of Wheal Bassett. I consider this to be one of the "little things" which is destined to become one of the "great things" at perhaps, no distant day. COOK'S KITCHEN shares are steady, and a rise is anticipated. The mine looks well. ROSE AND CHIVERTON UNITED (formerly East Wheal Rose), has been inspected by a very competent agent, who has been under Messrs. Taylor and Sons for many years past. His opinion of this great property is very favourable.—N.B. At BRYN GWION a fine lode of lead ore has been discovered in the 102 east, worth 50s. per fm. The returns have exceeded the last month's cost by 130t., and never looked so well on any previous occasion.

From Messrs. WARD and JACKMAN:—The past week has been remarkably barren of any important improvements. The principal feature has been the satisfactory settlement of an unusually heavy account, which fully shows that the low price of money, and other favourable circumstances, have caused capitalists to embark largely in this class of investment. Mining, all know, will not invariably prove profitable at starting, but with the advantages of scientific improvements, aided by practical experience in the selection of properties, no pursuit pays so well, or presents so many fascinating instances of success. A sett recently divided from Drake Walls, and having all its lodes running through it, and immediately adjoining the Prince of Wales Mine to the east, has this week been started, in 12,800 shares, and called the WEST DRAKE WALLS COPPER AND TIN MINE. The report of Capt. Gregory is a very favourable one, and we heartily recommend our friends to obtain a few shares in it whilst the price is merely nominal. AT BRYN GWION we are advised a fine course of ore has been cut in the bottom of the 102, worth 50s. per fathom, and that the mine is generally looking better. We have before mentioned SOUTH BASSET as a mine which is likely one day to repay the shareholders handsomely for their outlay and perseverance, and we again draw the attention of our friends to it. The sett adjoins the celebrated Wheal Bassett, and of which it was formerly a part; therefore, its position cannot be better, and warrants our belief in a great probability of success. A meeting has just been held, and a call to pay off all liabilities to the end of December made, and on the 19th inst. about 20 tons of fair average copper ore will be sampled. As the levels are being extended east the lode appears to improve, and in the 142 the lode can be seen 8 ft. wider, and no north wall, and which contains stones of grey and yellow copper ore, and is letting out a stream of water still further north. This is considered by practical miners a very good indication. They have also a kindly lode in the 100, and in the rise in back of the 30 the lode yields 1 ton of ore, and the winze sinking below the 75 will produce 2 tons of copper ore per fathom. We have for many years past. His opinion of this great property is very favourable.—N.B. At BRYN GWION a fine lode of lead ore has been discovered in the 102 east, worth 50s. per fm. The returns have exceeded the last month's cost by 130t., and never looked so well on any previous occasion.

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underground working sections of Levant may justly compare it to a gigantic honeycomb, so intricate and extensive is the network of operations; and the length of levels may be reckoned by miles in extent. Provided tin and copper advanced in price, there is a large field for employment on ground now lying idle, but will hardly pay at existing rates of metals. Sir Charles Lemaire ascertained that the quantity of water pumped out of the earth by 60 Cornish engines in the year 1837 attained the startling aggregate of close upon 37,000,000 tons. At one mine, Wheal Abraham, he estimated that the enormous quantity of 45,500 hogsheads of water had been pumped up in 24 hours from the depth of 240 fathoms! It was also further reported that during the year 1837 the greatest quantity of water discharged from any of the Cornish mines was from the Great

## Mining Correspondence.

## BRITISH MINES.

**BEDFORD UNITED.**—J. Phillips, Feb. 13: The lode in the 90 fm. level, on the north lode, is 3 ft. wide, carrying a leader 10 in. wide, producing good saving work. The lode in the 75 east is 1 ft. wide, containing spots of ore. The lode in the 62 east is 1 ft. 6 in. wide, composed of capel, spar, mundic, and good stones of ore. The stopes throughout the mine continue to yield their usual quantity of ore.

**BEDL-AUR.**—H. B. Harvey, Feb. 14: The shaft is without change, except that the water is not going so well as usual. Jones's pitch is yielding about 15 cwt. of lead ore per fm.—ground stiff. Williams's pitch is without change, but looking very promising, yielding about 15 cwt. of ore per fm. I have commenced to cross-cut north-west from the Brynlla at the 70 yard level, north-east from shaft, to intersect the Cottia vein; the ground is rather stiff. I have to day sold the ore to Messrs. Walker, Parker, and Co., 6½ tons, which realises 12f. 10s. per ton.

**BOTTLE HILL.**—Joseph Eddy, Feb. 14: South Copper Lode: The ground in the 24, west of shaft, is still getting more favourable for driving, but the lode is still split up in branches; a few fathoms further driving will get us out of the influence of the hard elvan, and I believe it will be a trial point for the lode at this depth. The lode in the bottom of the 12 still holds its size, and about the same for quality.—Main Lode: The lode in the stopes east of Bucking-house shaft is now about 7 feet wide, the lode throughout producing work of moderate quality. The tribute ground is about the same as when reported on last week. Our parcel of tin is sent on to Truro. I shall go down to see the weight of it tomorrow.

**BRONFLOYD UNITED.**—T. Kemp, Feb. 13: The ground in the engine-shaft continues fair for progress, but the water is on the increase in it, and I am afraid we shall not be able to sink it to the next level without the aid of pumps. The winze under the 52 is worth from 1½ to 2 tons of lead ore per fathom. The three stopes in the back of this level produce on an average 18 cwt. of lead ore per fathom. We sample 40 tons of lead ore to-day.

**BRYN GWYN.**—H. Nottingham, Feb. 12: The stope of ground we have been cutting, and other preparatory work in the south-west level from the middle of the incline, is completed, and we are now in course of driving the level south on a very strong joint, full of congenial ground for bearing lead, though it is yet unproductive. The lower level driving south-west from incline continues of the same character, which is less promising than the above. We have not made any discovery in the level driving south from sump, in the top of incline, yet, so I have now put the men to sink a little in the bottom of the level to ascertain the character of the ground in depth. The workings in the middle of Clark's level are rather poor for lead. The tributaries in the south end of the same level are making fair wages. The tributaries' sump, sinking in the middle of Field's level, has become so hard and close in the bottom that I have thought it advisable to suspend the sinking, and they are now stopping up the ends of the sump for lead.

**CAPR CORNWALL.**—R. Pryor, R. P. Goldsworthy, Feb. 13: The lode in the 90 end east is producing occasional stones of tin, and is letting out water freely, which is increasing as the end advances. The lode in the 70 end west is sprigged with mundic and yellow copper ore, very kindly, and ground favourable.

**CARADON CONSOLS.**—S. Bennett's Clymo's lode, in the 90 east, still contains gossan and ore, but not to value. West by the small cross-course it is much the same as seen over this point—split into branches, all containing copper, and of a very promising character. The winze into the 80 is somewhat improved during the past week, and is now worth from 13f. to 15f. per fathom. The 80 west, on Clymo's lode, is also improved, the lode being 15 in. wide, worth 4f. per fm. The stope in the 70 is not so well.

**CLARA UNITED.**—J. Davis, Feb. 12: Stopes Nos. 2 and 3, in back of the 90 end east are producing occasional stones of tin, and is letting out water freely, which is increasing as the end advances. The lode in the 70 end west is sprigged with mundic and yellow copper ore, very kindly, and ground favourable.

**CUDDRA.**—F. Puckey, Feb. 13: In the 130 cross-cut north, west of Walker's shaft, we have cut into the end 12 ft., without any appearance of the north wall. As before stated, the first 12 ft., on the south part, is good for tin; the remaining 8 ft. are producing good average work together. The lode is of great promise, and worth for that width 35f. per fm. The different stopes, and every other part of the mine are without alteration since last reported on.

**DALE.**—Richard Nines, Feb. 11: I am very glad that the directors approved of suspending operations in the old mine until a more favourable change in the weather. You may rely that no time shall be lost in resuming operations as soon as there is a chance of doing so. Most of the men who took the cross-cut are gone on tribute, there being no other work for them after the pumping closed in the old mine.

**DEVON AND CORNWALL UNITED.**—T. Neill, Feb. 12: In the 24 cross-cut we continue to drive north to ascertain whether there is more lode in that direction. We have commenced driving west on the south part of the lode, to prove whether the ore holds down from the adit level; ground favourable for progress. At William and Mary the lode in the 34 west is looking promising, producing saving work for copper ore, and likely to improve. In the winze in the bottom of this level the lode is producing 7 tons of ore per fathom. In the stopes east and west of whin-shaft, the lode will produce 6 to 7 tons of ore per fm. The eastern winze in the bottom of this level (34) is sunk 6 fm. through a good course of ore, but at present is suspended, on account of quickness of water. The stope in the back of the 34 is worth 4 tons of ore per fm. In the 34 east the lode looks promising, and the water coming from it is highly mineralised.

**EAGLEBROOK.**—H. Tyack, Feb. 9: The cross-cut in the 30 fm. level, going north about 14 fm. west of cross-cut from the engine-shaft, has passed through the lode; we find it to be about 5 feet wide, and has a very good appearance, composed of quantities of carbonate of lime, soft white spar, yellow copper and patches of lead ore, which is good saving work both for lead and copper. The walls of this lode are well defined, and underlie about 18 inches in 6 feet. We have commenced to drive on its course west. There is no particular change in the 30 fm. level east since last report.

**EAST CARADON.**—J. Truscott, Feb. 13: Caunter Lode: The 100 east is worth 8f. per fm. The 100 west is worth 6f. per fm. The 90 east is worth 8f. per fm.—South Lode: In the 100 east saving work. The 70 west is worth 6f. per fathom. The 70 east, on south part, is worth 6f. per fm.

**EAST CHIVERTON.**—James Nancarrow, John Grose, Feb. 11: The ground in the shallow cross-cut south still continues very favourable for driving. I suppose we shall nearly drive to the boundary this week; we have not met with any lode yet. If we intend keeping our engine working longer to drive the 35 cross-cut north, I think we could build a dam to stop back the water from the 35 fm. level south.

**EAST ROSEWARNE.**—J. James, Feb. 14: In King's shaft, sinking below the 95 fathoms level, the lode is 9 in. wide, producing good stones of ore. It will shortly be intersected by the north branch, when we may expect it will greatly improve. In the 93 fm. level, east of shaft, the lode is 8 in. wide, producing very good stones of ore, and improving in appearance. In the 95, driving west of shaft, the lode is 1 ft. wide, worth 9f. per fm. In the 95 fm. level, driving west of King's shaft, the lode is 10 in. to 1 ft. wide—poor. In the 95, driving east of Hallett's shaft, the lode is in two small branches, which will shortly unite, and we may expect improve. We are stoping east and west of the rise in the back of the 95 fm. level, between Hallett's and King's shafts, in a lode 1 ft. wide—worth 8f. per fm. The stope in the back of same level, over the slide, is worth 10f. per fm. The stope in the back of the 95, west of King's shaft, is worth 8f. per fm. The stope in the back of the 75, east of King's shaft, is worth 7f. per fm. In the 43, driving east of King's shaft, on the engine-lode, the lode is 2 feet wide, and promising in appearance.

**EAST SNAFFELL.**—H. Rowe, Feb. 12: I have again arranged the bar-gains and work for another month. The shaft, about 6 fms. deep, with the sheeting and other timber-work fixed, has been set to six miners and nine labourers, at 24f. per fathom. A third party of men, two miners and two labourers, to cut out ground and lay tramroad in the new adit level. The lode in the adit south is widening; now about 2 ft. wide, composed of rich gossan, quartz, and killas, mixed with lead. In the bottom of the shaft the ground promises to change for the better, and the lode is of a more ore nature, now averaging 2 ft. wide, composed of friable quartz, gossan, and a little ore. I expect an improvement here shortly. The wheel will be on the spot in a few days, and the other surface work is in a satisfactorily forward state.

**EAST WHEAL GRENVILLE.**—G. R. Odgers, W. Bennetts, Feb. 13: In sinking the engine-shaft below the 95 we discovered on the south side of a branch 12 fm. wide, containing stones of ore and mundic, dipping towards the lode; we are inclined to think that this is the same branch on which ore is opened in the 45 fm. level, and which we thought very favourably of, should it make a junction with the main lode, and we still entertain the same opinion. The lode in the 95 fm. level, east of the shaft, is from 12 to 15 in. wide, and looking very promising indeed for an improvement. The lode in the 95 west is much the same; a cross-head has crossed the lode, which is letting down a great deal of water; therefore, in the course of a day or two we hope to give you further particulars. The lode in the rise above this level is worth from 1 to 1½ tons of ore per fathom. The lode in the winze is worth from 4 to 4½ tons of good ore per fm. All the other places are looking the same as before stated.

**EAST WHEAL RUSSELL.**—J. Goldsworthy, Feb. 13: Homersham's shaftmen have been engaged putting in wall-plates and other repairs for some days; they are, however, again engaged at the bottom of the shaft. The ground in the cross-cut driving north in the 140 east is not quite so favourable; fair progress is being made. In the 140, east of Robert's cross-cut, every effort has been made to reach the slide, which I am pleased to say we have in the back of the end. The great quantity of water which we have had to contend with has made the driving very troublesome indeed; we hope the water will soon drain, so as to enable us to open upon the slide, where there is a good course of copper ore. In the stope east of Friend's winze, in the bottom of the 130, the lode is worth 16f. per fm. In the winze sinking below the 130 the lode is 4 feet wide, composed of capel, quartz, prian, and copper ore, worth 15f. per fm.; the water being so quick, we are obliged to suspend the sinking for the present. At the trial shafts sinking on the new lodes, the lodes present a kindly appearance.

**FRANK MILLS.**—J. P. Nicholls, J. Cornish, F. Cornish, Feb. 13: The 145 tip-plate will, we hope, be completed by the end of the present week, when the men will commence the cross-cut west to intersect the lodes. Judging from the rich lode gone down in the bottom of the 130 over, we may fully expect having a course of ore at this point. We have suspended the extension of the 130 north, on east lode for the present, the ventilation being defective, and put the men to cross-cut west towards the western lode; this will prove whether there is any more parts of the lodes standing between the east and west lodes, and at the same time well ventilate both the north ends. The west lode in the 130 north is 1½ ft. wide, and yielding 4 cwt. of rich lead ore per fathom. The two stopes in the back of this level, on the east lode, are yielding ¾ ton and ½ ton of lead ore per fathom. The west lode in the 115 north is at present split up and disordered. We have, therefore, commenced a cross-cut east, to ascertain if the main part is standing in that direction. The two stopes in the back of this level are yielding ½ ton per fathom on an average. The west lode in the 100 fm. level north is yielding occasionally good stones of lead ore, and looking well for improvement. The three stopes in the back of this level are yielding 7 cwt. of lead ore per fathom on an average. The stope in the back of the 45 is yielding

¼ ton of lead ore per fathom. The remaining tutwork bargains are without change. The tribute department remains much the same as for some time past.

**FURSDON.**—J. Collins, Feb. 14: Our setting for February is as follows:—An end to drive east in the 31, by two men, at 4f. 15s. per fathom. A winze to sink in the bottom of the 11 east, by four men, at 8f. 10s. per fathom. An end to drive east in the 11, by two men, at 6f. per fathom. A stope in back of the 11, by six men, at 7f. 5s. per fathom. The stope in back of the 11 east is improving, also the end in the 31 east is looking more favourable. The other places are without change.

**FURSE HILL WOOD.**—William Dodge, Feb. 14: The progress in the 54 east has been impeded since my last report, in consequence of the pin of the crank breaking, thereby letting the water in. I find the lode in the end to-day over 2½ feet wide, composed principally of spar, capel, and mundic; the lode is very promising in character, and I expect an improvement daily as the end advances under the ancient workings. The tribute ground is much the same as last reported on—worth 6f. per fathom. We shall have a parcel of tin ready for market by the latter end of next week (computed) 3½ tons.

**GAWTON COPPER.**—G. Rowe, G. Rowe, Jun., Feb. 9: The ground in the engine-shaft sinking below the 60 is of a good description, and very satisfactory progress is being made.

The lode in the 60, west from cross-cut, is looking exceedingly well, being over 6 ft. wide, composed of quartz, mundic, and good quality copper ore to the amount of 6 tons per fathom. The lode in the 60 east is of the same general character, yielding 4 tons of ore per fm. The lode in the winze sinking below the 50, west from cross-cut, is in a fine course of ore, worth from 7 to 8 tons of ore per fm. The lode in the winze sinking below the 50, west from old sump, is also in a fine course of ore, worth from 8 to 9 tons of ore per fm. The ground in the 50 east, driving on the floorplan part of the lode, is without change, and our progress satisfactory.

**GLASGOW CARADON.**—W. Taylor, Feb. 12: The lode in the 78 west appears

to be opening, with strong capel spotted with ore, and letting out a good deal of water, but the progress is still slow; we are pushing it on to the ore ground so fast as possible. In taking down the lode in the 65, near the cross-cut, we find the lode disordered by it, and will be the same on the other side no doubt; I expect this would be the case. We are going forth by the side of the lode, carrying part of the capel, and shall open it when out of the influence of the cross-course; the lode is about 3 ft., and ground and lode on the other side dry; we shall soon be opening good ore ground here I hope. The stopes are producing some good quality ore. We are pushing on the 65 fm. level cross-cut south as fast as possible.

**GREAT LAXEY.**—Jas. Barkell, Feb. 12: There has been nothing done at the 220 fm. level since last report; owing to the severity of the weather the wheel has been frozen up, and the water rose to the 210 fm. level; the water is now out, and the driving is being proceeded with by a full force of men. There is no alteration to notice in the 210 driving north from the Welsh shaft; the lode is still worth, for lead and blende, 50f. per fathom. We have recommended driving the 200 fm. level north; the lode in the end is worth 30f. per fathom. The lode in the 190, driving north, is worth 60f. per fathom, and there is still a large portion of it standing to the east side of the level. The lode in the stopes coming out behind the end is 10 feet wide, and worth for lead and blende 160f. per fathom. The 180 end is hard and poor, and having our doubts whether we are on the right part of the lode or not, we have thought it best to suspend the driving until the sump, which is now being sunk below the 165, comes down to prove it; the lode in same sump is worth 80f. per fathom. By all appearance, we are now getting out of the influence of the small slide which intersected the lode in the 165 going north; still it is not looking so well as before we met with the slide; now worth 30f. per fathom. The 155 end, driving north, continues to improve, now worth 50f. per fathom.—South Ground: The lode in the 200 fm. level, driving south, is producing occasionally good stones of copper ore; there are several fathoms yet to drive to get up to the copper-bearing ground gone down in the sole of the 190. We are making good progress in the rise above the 190, to communicate with the sump coming down from the 165. The lode between the 165 and the 190 (as far as seen) will average about 8 tons of copper per fathom. The lode in the 165 fathom level end, going south, is not looking so well for copper as it did a week ago, now worth about 2 tons of copper ore per fathom.—Dumbells: We are making very good progress in sinking the engine-shaft below the 110 fathom level, 3 fms. 1 ft., having been sunk the last four weeks in a lode worth 80f. per fathom, and improving as we descend. The sump, sunk about 25 fms. south of the shaft, is down about 12 fms.; at this point we have commenced to drive both north and south, and we are now opening out rich ground for stopping. The 110 end is still opening out rich ore ground, the lode having improved within the past fortnight; it is now worth 90f. per fathom. There has been a further falling off in the value of the lode in the 85 end, going south, now worth 100f. per fathom. The 85 north is worth 40f. per fathom. The 70 south has improved, and is now worth 50f. per fathom. The 60 north is worth 40f. per fathom, and the 50 north is worth 50f. per fathom. The stopes throughout the mine are looking well, and are yielding about the average quantity of ore.—Glen Roy: Since we finished timbering and securing the old engine-shaft, we have, in addition to other work, been engaged in cutting lodges at the 10 fm. level; this being completed, we shall commence sinking below the 10 to-morrow.

**GREAT LAXEY.**—J. Barkell, Feb. 12: There has been nothing done at the 220 fm. level since last report; owing to the severity of the weather the wheel has been frozen up, and the water rose to the 210 fm. level; the lode is still worth 30f. per fathom. The 200 end is hard and poor, and having our doubts whether we are on the right part of the lode or not, we have thought it best to suspend the driving until the sump, which is now being sunk below the 165, comes down to prove it; the lode in same sump is worth 80f. per fathom. By all appearance, we are now getting out of the influence of the small slide which intersected the lode in the 165 going north; still it is not looking so well as before we met with the slide; now worth 30f. per fathom. The 155 end, driving north, continues to improve, now worth 50f. per fathom.—South Ground: The lode in the 200 fm. level, driving south, is producing occasionally good stones of copper ore; there are several fathoms yet to drive to get up to the copper-bearing ground gone down in the sole of the 190. We are making good progress in the rise above the 190, to communicate with the sump coming down from the 165. The lode between the 165 and the 190 (as far as seen) will average about 8 tons of copper per fathom. The lode in the 165 fathom level end, going south, is not looking so well for copper as it did a week ago, now worth about 2 tons of copper ore per fathom.—Dumbells: We are making very good progress in sinking the engine-shaft below the 110 fathom level, 3 fms. 1 ft., having been sunk the last four weeks in a lode worth 80f. per fathom, and improving as we descend. The sump, sunk about 25 fms. south of the shaft, is down about 12 fms.; at this point we have commenced to drive both north and south, and we are now opening out rich ground for stopping. The 110 end is still opening out rich ore ground, the lode having improved within the past fortnight; it is now worth 90f. per fathom. There has been a further falling off in the value of the lode in the 85 end, going south, now worth 100f. per fathom. The 85 north is worth 40f. per fathom. The 70 south has improved, and is now worth 50f. per fathom. The stopes throughout the mine are looking well, and are yielding about the average quantity of ore.—Glen Roy: Since we finished timbering and securing the old engine-shaft, we have, in addition to other work, been engaged in cutting lodges at the 10 fm. level; this being completed, we shall commence sinking below the 10 to-morrow.

**GREAT LAXEY.**—J. Barkell, Feb. 12: There has been nothing done at the 220 fm. level since last report; owing to the severity of the weather the wheel has been frozen up, and the water rose to the 210 fm. level; the lode is still worth 30f. per fathom. The 200 end is hard and poor, and having our doubts whether we are on the right part of the lode or not, we have thought it best to suspend the driving until the sump, which is now being sunk below the 165, comes down to prove it; the lode in same sump is worth 80f. per fathom. By all appearance, we are now getting out of the influence of the small slide which intersected the lode in the 165 going north; still it is not looking so well as before we met with the slide; now worth 30f. per fathom. The 155 end, driving north, continues to improve, now worth 50f. per fathom.—South Ground: The lode in the 200 fm. level, driving south, is producing occasionally good stones of copper ore; there are several fathoms yet to drive to get up to the copper-bearing ground gone down in the sole of the 190. We are making good progress in the rise above the 190, to communicate with the sump coming down from the 165. The lode between the 165 and the 190 (as far as seen) will average about 8 tons of copper per fathom. The lode in the 165 fathom level end, going south, is not looking so well for copper as it did a week ago, now worth about 2 tons of copper ore per fathom.—Dumbells: We are making very good progress in sinking the engine-shaft below the 110 fathom level, 3 fms. 1 ft., having been sunk the last four weeks in a lode worth 80f. per fathom, and improving as we descend. The sump, sunk about 25 fms. south of the shaft, is down about 12 fms.; at this point we have commenced to drive both north and south, and we are now opening out rich ground for stopping. The 110 end is still opening out rich ore ground, the lode having improved within the past fortnight; it is now worth 90f. per fathom. There has been a further falling off in the value of the lode in the 85 end, going south, now worth 100f. per fathom. The 85 north is worth 40f. per fathom. The 70 south has improved, and is now worth 50f. per fathom. The stopes throughout the mine are looking well,

above referred to. The lode in the 75 north is larger than the width of level; the part being driven on consists of white iron and quartz, with a small quantity of mastic interspersed throughout.

**SOUTH HERDSFOOT.**—Wm. Goldsworthy, Feb. 13: We are making good progress in driving the cross-cut in the 86. There is no change to notice in the ground since last reported on. The engine and pitwork are in good order, and working well.

**SOUTH OF SCOTLAND.**—P. Hawk, Feb. 11: I sent you on Saturday last a telegram announcing that the junction of Clark's and No. 5 lodes was reached east at the 30. I am pleased to inform you that I obtained at this point, by breaking through the hanging-wall of the lode, rich specimens of lead; so far as yet seen it is a most magnificent looking lode. You will remember that at the junction of the 18 the north part of the lode is here 6 ft. to the east, consequently we have to drive this distance before anything can be done to advantage, either north or south, on the course of this lode. I hope in about a fortnight from this date to be in a position to drive both north and south on the course of the lode at the 30, and to report something of importance.

**SOUTH WHEAL GRENVILLE.**—G. R. Odgers, W. Bennetts, Feb. 9: In the 20, east from shaft, the two parts appear to be approaching each other; the south one is from 6 to 8 in. wide, containing a little ore, mastic, &c., and the north part is 18 in. wide, principally quartz, so that it is only reasonable should they be combined to expect ore. The lode in the 20 west is 20 in. wide, of quartz and gossan, a strong looking lode. We shall shortly be able to resume the sinking of the engine-shaft below the 20.

**VIGRA AND CLOGAU.**—W. H. Holman, Feb. 14: At No. 2 Mine the adit end east is producing visible gold, also a stope in back of level commenced on 1st inst. 6 fathoms behind the end. The adit level west is now in a lode 6 ft. 6 in. wide, of good quality, and we expect shortly to see a shallow shoot of gold there. No. 4, sink under adit east, is commenced, and in about 3 fathoms sinking may be expected to reach good gold ground. The stope, west in breast of No. 1 level, is turning out very good visible gold. The incline stope, east of No. 1 shaft, is cut down to the bottom of No. 1 level. At No. 1 Mine the cross-cut, west of cross-course, is progressing. All other departments proceeding well. On Saturday next a bar of gold about 60 ozs. will be forwarded.

**WESTMINSTER.**—E. Evans, Feb. 12: We have very fine weather for outdoor work, and good progress is being made in building the engine and boiler houses; the former will be finished this week should the weather keep fine. The carpenters' work for roof, &c., is in a forward state, and every effort is being made to complete everything as quickly as possible.

**SWYST BASSET.**—G. Lightly, Feb. 13: Grenville's Shaft: In the 154 west the lode is 3 feet wide, containing stones of ore; in the same level east the lode is at present obscured by the cross-course. In the 144 east the lode is 4 feet wide, yielding 2 tons of ore per fm.—Thomas's Shaft—Caulter Lode: In the 84, east and west, the lode is 1½ foot wide, and in the 75 east 1 foot wide, at each point producing a stope for tin.—Middle Lode: In the 75, east and west, the lode is about 1 ft. wide, producing a little copper ore. In the 65 east the lode is 1 ft. wide, producing 1 ton of ore per fm. In the winze sinking under the 52 the lode is 3 ft. wide, yielding good work for tin, and also a little copper ore.

**WEST CARADON.**—Wm. Johns, N. Richards, Feb. 12: On Downing's lode in the 170, both east and west of cross-cut, both of the ends are yielding saving work. Allen's lode in the 170 east, seems to be improving, and producing good stones of ore. On Vivian's lode, in the 170 west, we have driven through the patch of elvan mentioned in our former reports; the ground is now easier for progress, but the lode continues much the same. On Jope's lode, in the 128, west of cross-cut, we have reached the wall of the main part of the lode; so far as we can see it is presenting precisely the same appearances as in the level above before reaching the ore ground. All other tufwork bargains remain without much change since last reported on. We have fixed on the spot where we shall sink our new shaft, and shall commence forthwith. Seeing such a beautiful gossan on the backs, we believe good results will be achieved at a shallow depth.

**WEST ST. IVES.**—Thos. Uren, Feb. 15: The ground is more favourable for driving, the lode has improved very much, and producing some good rocks of copper ore. The caunter lode is much the same as when I last wrote.

**WEST WHEAL KITTY.**—William Vivian, Feb. 13: I now send you account of tinstuff sampled and sold on February 11. We sold 64 tons of tinstuff, which produced 1 ton 4 cwt. 3 qrs. 7 lbs. of black tin. From this we find the mine is improving in value. We have driven through 10 fathoms of tin ground in the 170 east, we have driven through the 170 west, we have driven through the patch of elvan mentioned in our former reports; the ground is now easier for progress, but the lode continues much the same. On Jope's lode, in the 128, west of cross-cut, we have reached the wall of the main part of the lode; so far as we can see it is presenting precisely the same appearances as in the level above before reaching the ore ground. All other tufwork bargains remain without much change since last reported on. We have fixed on the spot where we shall sink our new shaft, and shall commence forthwith. Seeing such a beautiful gossan on the backs, we believe good results will be achieved at a shallow depth.

**WHEAL AGAR.**—G. Lightly, Feb. 13: Old Whim-shaft: In the 140 east the lode is 2½ feet wide—saving work for tin. In the winze below the 130 the lode is 2½ ft. wide—saving work for tin. In the 120 east the lode is 4 ft. wide, producing low quality tinstuff.—Western Shaft: In the 90 east the lode is 3 feet wide, at present unproductive. In the 110 east the lode has not been taken down since last report.

**WHEAL BULLER.**—J. Inch, Feb. 13: Stevens's Shaft: In the 90 west the lode is 3½ ft. wide, producing tiny work, and letting out a quantity of water, but has not yet drained the bottom of the 80. The 80 east is worth for tin 25¢ per fm. The winze sinking under this level is worth 40¢ per fm. The falling off in the winze shows the lode is not so large. The stope in the back of this level is worth 32¢ per fm. The 80 west is worth 32¢ per fm. The stope in the back of this level is worth 20¢ per fm. The 70 east is worth 10¢ per fm.

**WHEAL EMMA.**—Thomas Bennett, Feb. 14: The engine-shaft is being sunk with excellent speed; now full 11 fathoms below the 104. The 104 east, on the floor course, is also progressing very satisfactorily, at the rate of 15 ft. per week. The ground is very congenial for the production of copper ore, being composed of white granular killas, intermixed with branches of quartz, impregnated with spots of copper and mastic converging towards the stope. We have about 12 fms, further to drive to get forward opposite the shoot of ore gone down in bottom of the 92, which I hope to complete by about the middle part of next month, when we shall commence driving north towards the lode. The lode in the winze sinking in bottom of the 92 is, I am glad to say, daily improving, worth at present full 2 tons of good ore per fathom; and I am of the decided opinion that in proportion as we descend the more valuable the lode will be found. No. 1 stope, in back of the 92, is worth 20¢ per fathom; No. 2 stope, in back of the 92, is worth 12¢ per fathom; No. 3 stope, in back of the 92, is worth 18¢ per fathom; No. 4 stope, in back of the 92, is worth 10¢ per fathom. We sold, on Jan. 16, 159 tons 20 cwts. of copper ore, which realised \$892. 0s. 3d., and we are progressing satisfactorily in making provision for the coming sampling.

**WHEAL GRENVILLE.**—G. R. Odgers, W. Bennetts, Feb. 9: The lode in the 120, east from shaft, is from 1 ft. to 15 in. wide, of quartz, &c., with a little tin, but nothing to value. The lode in the 120 west is 18 in. wide, of much the same character, &c., as the eastern end. The two stopes above this level are worth 32¢ per fm. each. In the rise above the 100 east we are almost daily expecting to hole it with the winze, when we expect to lay open some good tiny ground. The lode in the winze sinking below the 90 east is worth 10¢ per fm. In the last 6 ft., driving the 90 cross-cut north we have passed two branches, the last one being 6 in. wide, of quartz, &c., with a little copper ore; the ground to the north of it being easy, &c., we are in hopes of meeting something more shortly. The lode in the 80 west is 2 ft. wide, producing low stamping work.

**WHEAL SPARROW.**—W. Tregay, E. Chegwinn, Feb. 9: Jardine's Shaft: The stope on Pulsford's lode, in the back of the 60, is worth 12¢ per fathom for tin; lode 7 ft. wide; the water here is quick, from so much rain, and working irregular. In the 20 fm. level rise the new lode is unproductive, and we have been, and are now, cutting south into the capes to ascertain if more lode is in that direction.—Old Sump: The north lode in the 45 east produces good stones of copper ore; the lode in the bottom of this end produces 1 ton of copper ore per fm., and we have set the men to sink a winze into it. In the 45, west of the cross-course, the lode produces good stones of copper ore and tin, and promises improvement.—Belfry: In the 60 west we have been unable to take down the lode, in consequence of having been prevented from working here the last two days by the water; it is, therefore, as last reported, worth 15¢ per fm., and we expect to begin at work on it by Monday morning. In the 45 east the south lode is small, producing good quality tinstuff.

**WHEAL UNY.**—S. Coade, M. Rogers, Feb. 9: The water in the mine is more than we have ever known it to be by one-third, and the engine has to work seven strokes per minute to keep the water—10 ft. stroke with 13-in. poles.

#### FOREIGN MINES.

**FRONTINO AND BOLIVIA (SOUTH AMERICAN) GOLD.**—The directors have received the following advices from the mines for November month—Cost sheet from Bolivia, 700t. 7s. 6d., cost sheet from Frontino, 493t. 14s. 10½d. Produce of gold: Bolivia Mines, 265½ ozs., value (say) 670t.; Frontino Mines, 6½ ozs., value (say) 210t. The workings have been almost entirely suspended at the Frontino property, and Mr. Rouch entertains a confident hope that very favourable results will accrue from the change in the management which will be effected. The operations will now be concentrated to the development of the "Juli" mines alone.

**EL CHICO.**—The deep adit now being driven to get under the old workings of El Torno Mine has for some time past run on the course of a small vein of ore, and between two others of larger dimensions, all three apparently tending to a point of convergence, about 50 varas east of the El Torno shaft, and a little to the south of a prolongation of the line of the adit. The adit has, therefore, been diverted towards the south to strike the main lode at its point of junction with these three veins. On this head Mr. Rule, the company's agent, writes under date Jan. 8:—"In the El Torno adit end, driving now south-east, and consequently in a direction to cut all the vein, the ground is still favourable, and from the quantity of spar and pyrites observable, it would seem that we have begun already to cut into the north part of the vein, which is very wide." About 270 cargas (mule loads) of ore had recently been sent into the company's hacienda of San Pascual for reduction, and an additional quantity was ready for transmission from the mines, and would shortly be delivered at the hacienda.

**ALAMILLOS.**—Feb. 2: In the 4th level, west of San Rafael shaft, the lode is regular, but scarcely opening tribute ground. We have resumed the driving of the 4th level, west of cross-cut; lode small and compact, worth 1 ton per fathom. In the 3d level, east of Domingo's winze, the lode is falling off. The 3d level west shows indications of improvement. The 3d level, east of La Magdalena shaft, will be holed to the last-named end during the present month. In the 3d level cross-cut, north of San Enrique shaft, we expect to intersect the lode this month. In the 3d level, west of La Magdalena shaft, the lode is large, and of a kindly appearance, worth 1 ton per fathom. The 4th level, east of Taylor's shaft, has opened a valuable piece of ground in the past month, and is now worth 1½ ton per fathom. In the 4th level, west of Taylor's, there is a large rush, which renders it speedily for driving. In the 3d level, west of San Adriano shaft, we are again in contact with the main slide, which causes much inconvenience. In the 2d level, east of San Jose shaft, we are making a trial on the south part of the lode, where we expect an improvement shortly. In the 2d level, east of Crosby's cross-cut, the lode changes suddenly; and, although poor now, has opened a valuable piece of ground during the past month. The lode in the 2d level west is compact and regular, and the ground hard for driving. Taylor's shaft will be bad for sinking until we get deep enough for a cistern-plate; lode large and strong. The men at Crosby's shaft are making satisfactory progress. San Adriano shaft is very hard for sinking. The lode in Montoro's winze is irregular and unproductive. In Manuel's winze the lode has failed this last few days. Magdalena shaft is off the lode, and rather hard for sinking.

**General Remarks.**—The tribute department has been much interrupted by heavy rains, having caused the ground to give way near the main slide. The

surface and other work is going on regularly. The machinery is in excellent order. We estimate the raisings for February at 200 tons.

**LINARES.**—Feb. 2: South Lode: In the 110, west of engine-shaft, the lode is changeable, and ground hard for driving. The 75, west of Warne's shaft, is still poor; we expect it is only a hard bar of ground. The 65, west of Crosby's shaft, is unproductive. We are stopping the 120 east of engine-shaft, and cutting down the side of the lode, which is very wide, and spotted with lead. The lode in the 55, east of Thorne's shaft, is very wide, consisting chiefly of carbonate of lime and lead ore, worth for the latter 1 ton per fathom. The lode in the 95, west of No. 146 winze, is also a very strong, open, and promising lode. In the 85, west of San Jose shaft, the lode is of great width, containing calcareous spar, gossan, and good stones of ore. In the 65 cross-cut south there is no sign of lead to be seen as yet.—North Lode: In the 95, west of No. 147 winze, the lode is small and poor. This will pass near Taylor's shaft. We have succeeded in forking the water at Crosby's shaft, which is very strong indeed in this section of the mine. No. 151 winze is going down in a very strong lode, worth 1½ ton per fathom.—General Remarks: It was with the utmost difficulty we were able to get the water out of Crosby's shaft. The sink will be completed to the requisite depth for the 75 fm. level, and the ends started east and west from same without delay. The stopes throughout the mine are looking much as usual. We estimate the raisings for February at 275 tons.

**FORTUNA.**—Feb. 2: Canada, Incosa: The ground in the 100, west of O'Shea's shaft, is hard for driving; the lode contains stones of lead, but not enough to value. The lode in the 90, west of Henry's shaft, is of a promising appearance, and opening good tribute ground, worth 1½ ton per fm. In the 80 west the lode is small, and the ground hard for driving. In the 70, east of Carre's shaft, the lode has been disturbed by cross-courses and strong joints, and is worth 1 ton per fm. In the 70, west of Lowndes' shaft, the lode has a kindly appearance, and contains good stones of lead. The 45, east of San Tomas shaft, is fast reaching the eastern extremity of the ore ground in this direction. The lode in the 55, east of O'Shea's shaft, is very wide, and is looking more promising than it was. Nicholas's winze has much improved, especially in the eastern end, where the lode is large and solid, worth 1½ ton per fm. per ton. South Lode: In the 40, east of San Pedro shaft, the lode is large, and of a very kindly appearance, worth 1½ ton per fm. Very little has been done to the 40 west, on account of an increase of water. The lode in the 30 east is regular, and of a promising appearance. The lode in Caledonia's winze has failed lately; it will be down to the 40 this month.—Los Minas Mine: In the 100, west of engine-shaft, the lode is small, with good stones of lead. The lode in the 100, east of San Gabriel shaft, has been in broken ground between two cross-courses, but we have now reached the point of the lode. The 75, east of Colgan's shaft, is unproductive. In the 65, east of San Pablos shaft, the lode is open, and of a kindly appearance, worth 1½ ton per fm. The men are making good progress in Cologan's shaft, and will complete it to the 95 this month. Candido's winze is going down in a very compact lode, worth 2½ tons per fm. In Poveda's winze the lode is very strong; we expect to hole it to the 55 in a few days. Torre's winze is situated east of Cologan's shaft, and in advance of the 75; the lode is worth 3 tons per fm. Balverde's winze is west of engine-shaft, and in advance of the 95; the lode is worth 1½ ton per fm.—General Remarks: There has been no unusual fluctuation in the stopes during the past month. The machinery is in good working order, and notwithstanding the increase of water caused by the late heavy rains, both mines are in fork. We estimate the raisings for February at 400 tons.

**GONNESES.**—R. W. Rickard, Feb. 5: San Giovanni Mine: Taylor's cross-cut having entered the ferruginous limestone, in which the main or No. 1 lode is contained, we have every reason to expect that the desired intersection of the lode by this cross-cut will take place in a few days. Taylor's level, east of Zanna's winze, on the course of the No. 1 lode, has been extended 6½ metres during the month, but it is only extended about 1 foot high into the level, we are unable to correctly estimate its yield. The western end of Taylor's level, driving from the 55 metres of which yielded at the rate of 4 tons of ore per fathom, when a small cross-course was met with, which, for the time impoverished the lode, but it is already improving again; in the present end it is 4 feet wide, and yields large lumps of ore, promising to resume its former productiveness. The eastern end of Victor Emanuel level, is open, and of a kindly appearance, worth 1½ ton per fm. The men are making good progress in Cologan's shaft, and will complete it to the 95 this month. Candido's winze is going down in a very compact lode, worth 2½ tons per fm. In Poveda's winze the lode is very strong; we expect to hole it to the 55 in a few days. Torre's winze is situated east of Cologan's shaft, and in advance of the 75; the lode is worth 3 tons per fm. Balverde's winze is west of engine-shaft, and in advance of the 95; the lode is worth 1½ ton per fm.—General Remarks: There has been no unusual fluctuation in the stopes during the past month. The machinery is in good working order, and notwithstanding the increase of water caused by the late heavy rains, both mines are in fork. We estimate the raisings for February at 400 tons.

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or three years since, but a coarse, though extremely hard, Siberian diamond is used. The diamond being set in a tube, and the boring being made by simply rotating it, the largest hole is made, with a small amount of work, the centre core being easily removed at intervals, and with but little trouble.

**MINING AND COLLIERIES INTERESTS IN PARLIAMENT.**—Parliament has not opened without several indications that mining and colliery matters will occupy a prominent position during the new session. Mr. Ayrton has given notice of the re-appointment of the Committee on Mines of last session. It will be remembered that a large quantity of evidence was taken (of which reports were published in this Journal), but the session concluded before the committee had made its report. The names the hon. member has proposed are—Sir Philip Egerton, Gen. Dunne, Viscount Cranbourne, Messrs. Ayrton, Bruce, Clive, Fawcett, Greenall, Kinnaird, Liddell, Neate, Powell, Vivian, and Woods. They are exactly the same as those of last session, except that of Mr. Ferrand, who was one of the original committee, but who lost his seat on petition. A motion has been made to refer the reports of the Mining Inspectors to this committee. Mr. WALPOLE has given notice of the introduction of two bills upon cognate subjects—a bill generally to extend the Factory Acts; and a bill to regulate the hours of labour for children and young persons and women employed in workshops, and for other purposes relating thereto. The bills are not yet printed, and their particular application, therefore, is not yet known. Some interesting reports, received from Her Majesty's Secretaries of Embassy and Legation, respecting coal in foreign countries and the British colonies, has just been presented to both Houses of Parliament by command of Her Majesty.

**TRADES' UNIONS COMMISSION.**—Sir Wm. Erle, the Earl of Lichfield, Lord Elcho, Sir E. W. Head, Sir Daniel Gooch, and Messrs. H. Merrivale, James Booth, J. A. Roebuck, Thos. Hughes, Fred. Harrison, and Wm. Matthews were last night "gazetted" Her Majesty's Commissioners to enquire into and report on the organisation and rules of Trades' Unions and other Associations, whether of workmen or employers, and to enquire into and report on the effect produced by such Trades' Unions and Associations on the workmen and employers respectively, and on the relation between workmen and employers, and on the trade and industry of the country; with power to investigate any recent acts of intimidation, outrage, or wrong alleged to have been promoted, encouraged, or connived at by such Trades' Unions or other Associations, and also to suggest any improvements to be made in the law with respect to the matters aforesaid, or with respect to the relations between workmen and their employers, for the mutual benefit of both parties.

In another column we print the prospectus of the CARNARVON AND BANGOR SLATE COMPANY (Limited), which has been formed to work the celebrated old Talyssarn Quarries, situated in Nantlle Vale. This is no undeveloped or untried property, as these quarries have been worked for the last seventy years with large profits; the slate is acknowledged to be of the purest and finest description; there is a large extent of slate rock unworked, and, as the directors state in their prospectus, "it is not a matter of speculation or doubt as to the handsome profits to be realised from the efficient working of this property." The Slate Trade has become one of the most important, as it certainly is one of the most profitable, businesses in the kingdom. The demand for slates is practically unlimited; every year it becomes adapted to fresh uses and purposes, and, consequently, for the last ten years it has been rising in price, and even so late as in January last there was an additional advance made. Not only has the home consumption of slates been steadily increasing, but the exportation also. We supply the Continent of Europe, and both North and South America. We also ship them largely to Australia, China, Japan, Africa, the East Indies, and all British colonies—in fact, wherever civilisation is established the old and primitive system of roofing has been entirely superseded. No business can be more legitimate than one where the demand is so much in excess of the supply. Several companies have been formed with a view to increase the supply, but, unfortunately, some have been unsuccessful, owing to their having worked unopened and untried ground. The deposits of really good slates are limited to two or three localities—as, for instance, Bangor, Nantlle Vale, Llanberis, and the Festiniog districts. But there is always a large amount of dead work to be done in the opening of slate quarries, and those companies only prove successful who have had these dead works executed previous to their taking possession of the property, or had a very large and available capital sufficient to reach that stage.

**THE PRINCE OF WALES AND THE WEST DRAKE WALLS MINES.** It was mentioned in last week's Journal that it had been decided to work the West Drake Walls Mine as a separate enterprise. This property, which has been recently acquired by the managing committee from His Royal Highness the Prince of Wales, immediately adjoins the now prosperous Prince of Wales Copper Mine. Capt. T. Gregory (manager of Drake Walls Mine) states that, although in West Drake Walls the operations have not been carried on to any considerable extent, yet three lodes have been intersected, and which have varied in size from  $2\frac{1}{2}$  to 4 feet wide, all of which have a very favourable appearance. The one now producing such rich ore in the adjoining Prince of Wales Mine presents precisely the same very favourable indications in this sett as in the latter mine, at or about the same depth. The length of West Drake Walls is over 600 fms. on the course of all the copper and tin lodes running through the Prince of Wales and the Drake Walls Mines. It is well situated for carriage of ores and materials, and easy of access, being within  $1\frac{1}{2}$  mile of a shipping port. Captain Gregory further states that he has great confidence in recommending this valuable mine, as it immediately adjoins to the east the Prince of Wales Mine, and adjoins the western boundary of Drake Walls, which from almost time immemorial has produced tin in large quantities. Some rich parcels of copper have from time to time been raised from the same lode now being worked in the Prince of Wales Mine. Any good discovery in this mine must be of great value to Drake Walls, as the copper-ores are standing almost entire for a distance of from 900 to 1000 fathoms in length in Drake Walls, and at about 250 fms. east of West Drake Walls boundary. This lode can be reached by a cross-cut from Drake Walls western shaft of 50 or 60 fms., which will give a height of 90 fms. of backs, where the lode for the full distance of 250 fathoms in length stands unbroken to the surface. This is very important, and I hope to see it developed at no distant time. Any amount of attle or rubish from the cross-cut could be advantageously deposited in the old tin stopes, thus saving the expense of drawing, &c. Attention is also drawn to the probable value of the tin lodes running through the entire length of West Drake Walls, which might be profitably worked should the price of tin improve, as the richest and most valuable discoveries of tin in Drake Walls are to the west, and running into West Drake Walls.

**MINING AND ITS PROSPECTS.**—(From Mr. Peter Watson's "Weekly Mining Circular and Share List," No. 41, Vol. ix.)—"The gradual decline in the importation of foreign metals, more particularly of tin, arising from the decreasing return made by the mines in the Baltic Islands, and the diminution of our home production, consequent upon the stoppage last year of so many Cornish tin mines, added to the fact that there is a greatly increasing demand, continue to produce their beneficial effect upon the metal market. Singularly enough, contemporaneously with this improvement in metals, many of the leading mines throughout Cornwall have not for years past shown such encouraging indications as at the present time. This I am in a position to unhesitatingly affirm, having just returned from Cornwall, where I visited several of them. I am pleased to state that those mines to which I have for some time past specially directed attention are in every respect in a much more satisfactory position generally, and present prospects of a very much more encouraging character than I have hitherto represented. Taking these facts into consideration, I am more than ever convinced that the present year will prove highly remunerative to all who invest capital judiciously in Cornish and Devon Mines."

**GEOLOGICAL SOCIETY OF LONDON.**—Feb. 6: Warington W. Smyth, M.A., F.R.S. (President), in the chair. R. G. M. Browne, Admiralty Registry; Doctors' Commons, College-crescent, Hampstead; the Rev. Michael Alfred Moon, Cleator, near Whitehaven; and Benjamin B. Orridge, St. John's wood Park, were elected Fellows. The following communications were read:—

1. "On the Jurassic Fauna and Flora of South Africa," by Ralph Tate, F.G.S.

2. "Further Remarks upon the Relation of the Chilidford Beds to the Fluvio-marine Craze," by the Rev. O. Fisher, M.A., F.G.S.

On Wednesday, the following papers will be read:—1. "On the Fossil British Oxen"—Part II., by W. Boyd Dawkins, M.A., F.G.S.—2. "On the Geology of the Upper Part of the Teign Valley," by G. W. Ormerod, M.A.—3. "Notes on the Geology of Mauritius," by G. Clark: communicated by the Assistant-Secretary.

**SOCIETY OF ENGINEERS.**—On Monday the paper read on 4th inst., on Safety Valves, by Thomas Baldwin, will be discussed.

**ATMOSPHERIC GAS.**—In a highly interesting paper "On Artificial Illumination," read before the Society of Arts by Mr. D. N. Defries, reference was made to an improved apparatus for producing gas from volatile oils (upon a principle similar to that involved in the invention of Mongrel, and others described in the *Mining Journal* during the past few years), invented by Mr. E. Welch. The apparatus was much admired, both for its ingenuity and for its advantages in its application to a town or city remote from a coal-producing district. Mr. Defries also referred to the several kinds of burners in use; to the "carburettor," and other contrivances connected with gas lighting, as well as to the magneto-electric and magnesium lights, and to other means of artificial illumination. The paper was listened to with much attention, and at the close of the discussion a cordial vote of thanks was passed.

## The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, FEB. 15, 1867.

COPPER.	£ s. d.	£ s. d.	IRON.	Per ton.
Best selected...p. ton	85	0	87	0
Tough cake and tile	83	0	85	0
Sheathing & sheets	87	0	88	0
Bolts	93	0	—	—
Bottoms	96	0	—	—
Old (Exchange)	77	0	—	—
Wire	86	0	87	0
per lb.	0	1 0	Pig No. 1, in Wales..	4 5 0
Tubes	.....	0 1 0	Refined metal, ditto..	4 0 5
BRASS.	Per lb.		Bars, common ditto..	5 10 0
Sheets .....	per lb.	10d.	Ditto, to arrive.....	6 10 0
Wire .....	"	9d.	Nail rods .....	7 0 0
Tubes .....	"	11d.	Staff'd. in London	7 15 0
Yellow Metal Sheath.p. lb.	7 1/2d.	—	Bars ditto	7 15 0
Sheets .....	.....	7 1/2d.	Hoops ditto	8 15 0
SPELTER.	Per ton.		Sheets, single.....	9 10 0
Foreign on the spot .....	21	5 0	Pig No. 1, in Wales..	4 5 0
" to arrive .....	.....	21 10 0	Refined metal, ditto..	4 0 5
ZINC.	Per ton.		Bars, common ditto..	5 10 0
In sheets .....	28	0 0	Ditto, to arrive.....	10 10 0
TIN.	STEEL.	Per ton.	Do. railway, in Wales	5 0 5
English blocks .....	90	0 0	Do. Swed. in London	10 0 5
Do. bars (in barrels)	91	0 0	To arrive.....	10 0 5
Do. refined .....	93	0 0	Do. f.o.b. Tyne or Tees	2 14 9 3
Barca .....	88	0 0	Do. Nos. 3, 4, f.o.b. do.	2 6 2 7
Straits .....	285	0 0	Railway chairs .....	5 10 0
TIN-PLATES.*	Per box.		Spikes .....	11 0 0 12 0
IC Charcoal, 1st qua.	1 12	0 1 13	Indian Charcoal Plgs.	7 0 0
IX Ditto, 1st quality	1 18	0 1 19	In London p. ton..	7 0 0
IC Ditto, 2d quality..	1 8	0 —	English Pig, com...	19 15 0
IC Ditto, 2d quality..	1 14	0 —	Ditto, LB.....	20 10 0
IC Coke .....	1 4	6 1 6 0	Ditto, WB.....	22 15 0
IX Ditto .....	1 10	6 1 12	Ditto, sheet .....	20 10 0
Canal plates, p. ton..	13	10 0 —	Ditto, red lead .....	21 5 0
at works .....	12	10 0 —	Ditto, white .....	27 0 0 30 0
Straits .....	.....	—	Ditto, patent shot .....	23 0 0
Spanish.....	19	0 0	Spanish.....	19 0 0

\* At the works, 1s. to 1s. 6d. per box less.

**REMARKS.**—Again the Metal Market has presented during the past week an appearance of considerable quietness. Not improbably the excitement that has lately taken place in political matters may have had some effect upon commercial matters generally, and tended to produce a relapse into dullness, but it is to be hoped that this will soon pass away, as it is evident that the present Government are intending to introduce into the House several important and valuable measures, and we have little doubt, therefore, that business will soon again resume its former vigour and activity, and that we shall find as the spring advances a good business will be done in metals; there appears every reason to expect that this will be the case after the present slight check has passed away. The advices received from India are again favourable, and it is very satisfactory to find that the famine is disappearing, and that rice and other breadstuff crops are looking as well as could be wished. The rainy season, which has now passed away, had been unusually favourable, and water is plentiful, so that the second crops of this year seem to promise to be as prolific as the first. It is very satisfactory to receive these accounts, and we trust it is an earnest of a better business being done with India as the season progresses than has been the case for some time past, and that the time is not far distant when our commercial transactions with that important part of the empire may again resume their former activity.

**COPPER.**—The market for this metal has remained dull throughout the week, and very few transactions have occurred, nevertheless prices remain steady at the quotations.

**IRON.**—In Staffordshire there is an improvement in the demand, though it is by no means equal to the means of supply. There are rather more orders for home consumption, but, perhaps, the chief cause of the addition to the specifications given out is the desire to get iron sent to the United States before the increased duties come into operation, which it is hoped may enable buyers there, while paying the low rate to the revenue, to extract the enhanced price higher duties will occasion to their customers. In Welsh, the depression of the trade has lately been cheered with a slight improvement on home account. The principal works keep up operations tolerably regular; but the majority of makers find it very difficult to keep their mills and furnaces going. It is hoped, however, that railway companies, and the large contractors, will be in a position to provide capital for carrying out their contemplated projects, so that in the course of the spring animation will be infused into the trade. The men employed at the leading ironworks have expressed their willingness to accept the proposed reduction, which, when it comes into operation, will make the scale of payment 20 per cent. lower than it was 18 months ago. There has been a large quantity of rails shipped for the United States, and for the month of January there were exported 5775 tons of iron. The advices from New York are favourable as to requirements, but much uncertainty exists as to the effect of the new Tariff Bill. A good spring trade is expected with Russia, and the prospects of business with Canada are encouraging. In Swedish iron business is not quite so active. In Scotch pig-iron the market has been dull during the week, and the price has remained without alteration, at 53s. 9d. cash.

**LEAD.**—A moderate demand continues to exist, and prices remain without alteration.

**TIN.**—The market for foreign remains dull, and transactions have been very limited. Some small quantities of Straits have been sold at 85l. 10s., prompt one month, and for arrival 40 tons have been sold at 86l. 10s. English continues steady, at about official quotations.

**SPELTER.**—A depression in prices has taken place in consequence of advices from France of a reduction in the price of sheet zinc equal to 2d. per ton, and business has since been done on the spot at 21l. 5s., and at outports at 21l. 10s.

**TIN-PLATES.**—The works are fairly employed, and for charcoal there is a good demand.

**STEEL AND QUICKSILVER.**—Nothing special to report.

**BIRMINGHAM, FEB. 15.**—Rylands' "Iron Trade Circular" says—Pigs of good brands in demand. Bars improving. Business better. Works were fully employed; more orders about; prices the same, and not inclined to move.

The settlement of the fortnightly account in the **Mining Share Market** took place on Thursday, and was again particularly heavy in Prince of Wales, Great Retallack, West Chiverton, Wheal Buller, Redmoor, Wheal Seton, North Croft, and a few other mines. During the week, also, rather an active business has been transacted in dividend and progressive shares, both for speculative account and for investment on the part of the public. West Chiverton have been rather flatter at 60 to 62; the meeting is to be held on the 21st, when the usual dividend, we presume, of 2s. per share will be declared. Prince of Wales, 35s. to 36s.; at the meeting, held on Tuesday, the accounts showed a cash balance in hand of 133l. 8s. 6d., and liabilities over assets, after charging three months' costs in advance, 634l. 12s. 11d. The report, full details of which will be found in another column, was very satisfactory; the various points in operation at the mine were valued in the aggregate at 195l. per fm. The ore sampled is 99 tons; 52 tons of which yields a produce of 103 per cent. and 47 tons 9 1/2 per cent. By the end of March the agent hopes to sample another 100 tons of rich ore. Since the meeting the 45 east has improved to 30l. per fm., and is a very important point, as a continuous course of ore has already been gone over at this level for more than 30 fathoms in length. Carn Camborne, 21s. to 23s.; Chiverton Moor, 6 1/2 to 8 1/2; Chontales Gold, 2 1/2 to 2 1/2; Clifford Amalgamated, 6 1/2 to 7. Drake Walls, 17s. 6d. to 22s. 6d.; West Drake Walls, 4s. to 6s.; the setts have been divided from Drake Walls, and a call of 2s. 6d. per share made; and there will, probably, be a large business doing in them, as the mine adjoins Prince of Wales, and has the same rich lode for 600 fathoms in length, and it presents at the depth the same very highly favourable indications as it did in Prince of Wales. Two other lodes have been intersected by an adit, and the sett also contains the Drake Walls tin lodes, which the agent considers can be profitably worked, should there be an improvement in the price of tin, as the richest and most valuable discoveries of

tin in Drake Walls are to the west, and running into West Drake Walls. Cook's Kitchen, 11 to 11 1/2; East Bassett, 18 to 20; East Caradon, 5 1/2 to 6; East Carn Brea, 3 to 3 1/2; East Lovell, 9 1/2 to 10 1/2; East Russell, 3 1/2 to 4 1/2; East Grenville, 1 1/2 to 2. Redmoor, 9s. to 11s.; at the meeting, held on the 8th, the accounts showed liabilities over assets of 230l. 16s. 1d., and a call of 2s. per share was made. Cross-cutting the lodes has been commenced, and the prospects are of a very favourable character. When seen in the 52 fm. level, the lode from which so much was expected was in very disordered ground; but in the 64 it is more settled, being a strongly mineralised clay slate, in which good deposits of ore may be expected.

Great Laxey, 15 to 16; Great Retallack, 47s. 6d. to 50s. No change has taken place in the mine since our last. Great South Tolgus shares have fluctuated very much, and leave off at 10s. to 12s. 6d.; Great Wheal Vor, 17 to 18; Marks Valley, 4 to 4 1/2; New Seton, 30 to 32; North Croft declined to 44, 5, but leave off better at 54, 5 1/2; North Roskear, 10 1/2 to 11 1/2; North Treskerby, 2 1/2 to 2 1/2; Prosper United, 3 1/2 to 3 1/2; Providence Mines, 26 to 28; Rosewell Hill and Ransom, 30s. to 40s.; South Grenville, 8s. to 10s.; Tincroft, 13 to 13 1/2; West Caradon, 10 to 11; West Setons have advanced to 132, 13 1/2; West Caradon, 64 to 66; Wheal Basset, 64 to 66; Wheal Chiverton, 8 to 8 1/2; Wheal Grenville, 17s. 6d. to 20

equally alive to the same consideration—that nothing but a reduction of price, sufficient to create a more extensive demand, could meet the exigencies of the trade, and a reduction of 20s. per ton was decided upon. That reduction has had the desired effect. Every maker whose iron is known is full of orders, and second-class makers are very much better off than they would have been. We regret to state that shipbuilding iron has participated only very slightly in the improvement. The shipbuilding trade is slow to revive, but we look for a very speedy improvement. The transactions that have taken place during the past fortnight have not been on such an extensive scale as in the previous one, especially in rails, but good many orders for bars, sheets, plates, and railway work have come into merchants' hands from Canada; and we are glad to say that the North of England has secured a considerable portion of these orders, at least to the extent of 4000 or 5000 tons. Hitherto these have chiefly gone to Staffordshire and Scotland, on the assumption that the North of England iron was inferior, and the disadvantages respecting freight from the east coast could not be overcome. These prejudices have, happily, been removed, and we look in future for a continuance of these orders. The progress of the North of England has been somewhat retarded by the fact that the last few years have been years of prosperity, and manufacturers did not see the necessity, and were averse to taking the trouble requisite to open up remote markets. Had this been more considered, however, we apprehend that it would not have been necessary to shut up so many rolling-mills, and to blow out so many furnaces, as is now done in the district. The North of England has proved itself competent to compete in quality (particularly plates) with the best South Staffordshire or Scotch makers, and, by a little more attention to the means of export, can have an equally good footing in distant markets; so that, whatever is to be gained by these advantages is not difficult to be secured. A quiet business has been done in bars, and the prices firm at our quotations. Pig-iron is very dull.

**THE COPPER TRADE.**—Messrs. Vivian and Younger (Feb. 15) write.—The market continues quiet. Buyers do not come forward, and prices are a trifle easier for all descriptions. Duplicates of the advices by the Chilli Mail, now over due, have been received *via America*. The quantity of fine copper for England chartered for during the fortnight, from Dec. 17, 1866, to Jan. 2, 1867, was 1930 tons—say, 1080 tons of bars and ingots, and 850 tons of copper in regulus. Besides this, there were 70 tons of bars for France, and about 500 tons of copper in ore and regulus for America. Since the receipt of this news the market has shown signs of weakness. Business is reported in Wallaroo at 84/- 10s., in tough at 81/-, and in Chilli bars at 76/- on the spot. We have heard no transactions in ores or regulus.

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By order, ANTONIO BRADY,  
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Contract Department, Admiralty, Somerset House, Feb. 4, 1867.

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**G**REAT NORTH LAXEY.—Our attention has been directed to the report of a private meeting of a few shareholders in this company in the Isle of Man, and published in a local paper. These shareholders complain of the management of the mine, and although they have, as we are told, only become shareholders since the last annual meeting, when the whole of the accounts were gone into, they also charge the promoters with having purchased the mine of the official liquidator of the old company, and of having sold it to the new company at a large profit. It is not for us, in this place, to go into the question of management, or into the acts of the promoters, as they will probably be answered elsewhere; but, as Mr. Watson happens to be a director, we wish to refer to one or two portions of the local paper's report, to show how easy it is for persons to fall into mistakes, and to express our regret that the *ex parte* statements of a private gathering should be thus published to the world. In reference to the sale of the mine and plant by the official liquidators of the old company to the promoters of the new, *all we know is that the exact price paid for it was charged to the new company, and not one penny more.* This was fully stated in the printed prospectus issued on the formation of the company, the said prospectus also stating that that the shares were 10s. paid. *All the shares of the company were, we are assured, allotted at par.* That they afterwards went to a high premium, through circumstances to be mentioned hereafter, has nothing to do with the question. The shares in many companies go to high premiums, even before any allotment takes place at all.

But the shareholders in the Isle of Man, who certainly did not purchase at the original premium, in order to insinuate an enormous profit was obtained, point to the large allotments made to certain individuals—as many as 1000 and 1200 each—and say that many such persons have nearly, if not quite, *sold out*—with this, again, we have nothing to do. We answer for ourselves, and state we applied for 625 shares, and had them allotted to us. Of these 625 half, or 312 shares were for persons who had them at par (10s. per share), and beyond the 313 shares retained for ourselves we had no interest, directly or indirectly, or any profit or advantage from the company in any shape or form, beyond being appointed a director, entitling one to the *fifth part of 1000, a year.* Yet among the original allottees brought forward by one of the speakers at the private meeting, Mr. Watson's name appears as having had "625 shares allotted to him, and of which he only now holds 300"; and it is more than insinuated that the numbers allotted to each name were only those for which the persons signed the Articles of Association, and that they had in reality more. We only know we had not, and do not believe anyone else had. We took 313 shares originally, believing it to be a first-class speculation, and we believe so still. In reference to the premium the shares afterwards sold for, we may observe, first—that a short time before, the Great Laxey Mine had been sold to a London Limited company for 50,000*l.*, or 4*l.* per share, and had, through the discovery in a side vein, which has since been paying 30,000*l.* a year profit, risen in a few months to 1*l.* per share, or 1*l.* per share premium. Now, the shareholders in the Great North Laxey Mining Company were told by the manager of the Great North Laxey Mining Company that this rich side vein was *the same as the lode cut in Great North Laxey, the adjoining mine,* and that in Great North Laxey it was quite as promising for the depth as it ever had been in Great Laxey, and that only greater d. pth was required to make Great North Laxey a splendid prize. Capt. Rowe was also asked whether, under such circumstances, he thought the shares might be worth 5*l.* each, and he thought they would be worth more; and added, "every one who buys now at 3*l.* per share will make more money than those who sell." Upon this some of the shareholders got rather excited, and refused to sell at any price at all, and the market price was made 2*l.*  $\frac{1}{2}$ , 3—that is to say, the dealers in them offered to buy at 2*l.*  $\frac{1}{2}$  (or 2*l.* prem.), and 3*l.*  $\frac{1}{2}$ . This is the only possible foundation for the charge against the promoters of making the large profit named through the purchase of the mine; and to show its utter incorrectness we may add that the directors alone still hold upwards of 1800 shares, and of the others allotted to dealers and large holders in the old company we do not suppose 1-5*l.* were ever sold at 3*l.*, though we know many dealers bought at 2*l.*  $\frac{1}{2}$  and 3*l.*  $\frac{1}{2}$ . But it may be said, what were the official liquidators of the old company about in selling such a property for so small a sum? The answer may possibly be, that having advertised it in the *Times* and other papers they had no alternative but to sell it to the highest bidder; and it may also be stated that they had only the fog end of a lease to sell, whereas the present company obtained a fresh grant for 21 years from the Crown.

If the shareholders consider that the mine will be better looked after by having one or two directors in the Isle of Man, we should think there can be no possible objection to them, and we will, for one, make way for such an arrangement, having the good of the mine at heart; but when people complain of the price of shares being put down, through bad management, let them ask themselves whether the price has not rather been brought down by the same system that has also for many months been brought to bear (for personal motives) against the management of Great Laxey, and which has reduced the value of that splendid property 100,000*l.* in the market! If, as we firmly believe, we have a fine property in Great North Laxey, let us work it fairly and honestly together, and not by useless and angry recrimination and dissensions attempt to destroy public confidence in it.

"X. Y. Z."—It was our particular wish that everything which took place at the meeting should appear in the *Journal*.

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ROYAL INSURANCE BUILDINGS, KING STREET MANCHESTER; and 449, STRAND, LONDON, W.

INSTANTANEOUS COMMUNICATION with the STOCK and MINING EXCHANGES, avoiding the delay and annoyance of visiting the City to ascertain prices. A Monthly Investment Circular on application.

## GREAT MONA MINING COMPANY (LIMITED).—SECOND ISSUE OF SHARES.

This company was formed, with a capital of £25,000, in 5000 shares of £5 each, first issue 2500 shares (which were all taken up a little more than twelve months ago), for the purpose of developing a very valuable mining seat, in close proximity to the Great Laxey Mines.

The sets held by them, under lease from the Crown, are very extensive, comprising nearly 2000 acres, on which, it is stated by practical mining engineers, there will ultimately be three excellent mines. The company have proved the sets in parts by adit levels, both of which have produced good lead and copper ore. One feature of advantage is that the mine can be drained to a great depth by adit levels, without the aid of machinery; and, judging from what has already been produced, the directors believe that it will become a very profitable investment to the shareholders. Both Captain John Trevin, the resident agent, and Capt. John Kitto (who is a large shareholder), confidently assert that it will soon become a lasting dividend-paying mine. In fact, Capt. Kitto (under whose joint management the Great Laxey was brought to the proud position it has occupied amongst the best dividend-paying mines in the kingdom for some time past, having yielded to the original shareholders about 50 per cent. per annum in dividends alone, besides increasing the value of the shares about 500 per cent. in eighteen months) expresses his surprise at both the quality and quantity of ore obtained in this mine at so shallow a depth, and his confidence in its ultimate success. He also states that both quality and quantity are equal to the Great Laxey, at a much greater depth.

The chief operations have been on the Ballaglass part of the sett, where there is an engine-shaft sunk about 22 fathoms. At 10 fathoms a level has been driven north and south, and in this level there is a body of blonde, from 18*l.* to 2*l.* wide, which it is stated will pay for stoping. All the efforts have of late been concentrated on the erection of a 40-ft. water-wheel, which it is expected will be completed and at work by the end of this month. Immediately on the completion of the wheel, Capt. Trevin states that he can commence to raise ore, which will very soon place the mine in a very proud position.

The directors have decided at the present time only to issue 1000 of the reserved shares, feeling confident that the remaining 1500 shares will realise a good premium when the mine is a little further developed, and the present issue of 1000 shares will enable them so far to develop the property as to place it in a dividend-paying position.

The shares will be issued subject to the following conditions:—10*l.* to be paid on application, 2*l.* on allotment, 2*l.* in three months after allotment, and 2*l.* in six months. They will then be equal to the first issue in regard to calls, as £3 10*l.* has been called up on them.

Application to be made to Messrs. J. TAYLOR and Co., 17, Cross-street, Manchester, where prospectuses may be had and samples of ore be seen.

It will be necessary that immediate application should be made, as some portions are already taken up, and the list will only remain open a few days.

Should no allotment be made the deposit-money will at once be returned.

**B**LACK CRAIG CONSOLIDATED MINING COMPANY (LIMITED). Incorporated under the Companies Act, 1862, limiting the liability of shareholders to the amount of their shares.

Capital £20,300, in 3072 shares of £5 each, marked A, fully paid up, and 1000 shares, marked B, of £5 each.

£1 to be paid on application, £1 on allotment, £1 in four months, £1 in eight months, and £1 in twelve months after allotment, leaving shareholders with out further liability. The holders of B shares to be paid 10 per cent. out of profits before the holders of A shares are to receive any dividend; the holders of B shares may be paid off by the holders of A shares at the rate of £10 for each £5 share, by giving the holders of B shares six months notice of their intention to do so.

DIRECTORS.—R. R. MICHELL, Esq., Marazion, Cornwall.

THOMAS WESTON, Esq., Sheffield.

THOMAS FIELD, Esq., Crown-chambers, Threadneedle-street.

Two other directors to be appointed at the first meeting of shareholders.

BANKERS.—London and County Bank, Lombard-street.

SECRETARY.—T. P. SCRIVENER, Esq., 40, Norfolk-street, Strand.

AUDITOR.—Daniel BETTS, Esq., Cook's-court, Lincoln's Inn.

CONSULTING AGENT.—Capt. Arthur Waters.

AGENT AT THE MINE.—Capt. John Smitham.

OFFICES.—40, NORFOLK STREET, STRAND, LONDON, W.C.

PROSPECTUS.

This company has been formed for the purpose of extending the workings under a course of ore discovered in the 43 fm. level, and for developing the West Black Craig Mine, by the issue of 1000 B shares, and it is believed that the whole of the £5000 additional capital will not be required to be expended, before the mine will be making considerable profits. The sett is very extensive, and is held for a term of 31 years, from the 23rd May, 1857, at 1-16th royalty, and is traversed by several lodes, three of which only have been worked on, and have produced enormous quantities of lead, copper, and blonde ores. The mines are situated within a mile of the port and railway station of Palnure, from whence supplies of coals and materials are obtained, and the ores forwarded to the smelting-works. From the size, nature, and character of the lodes, and their great productiveness at such a shallow depth, and the economy with which they can be worked (coals, for instance, being 8*l.* 6*d.* per ton delivered), it may be said to offer advantages for the outlay of so comparatively small a capital that are seldom met with. The report of Captain Arthur Waters, Captain John Smitham, the late Capt. Stephen Eddy, Mr. George Henwood, and other practical mining agents, fully justify the belief that large quantities of ore will be produced by sinking deeper.

Prospectuses, plans of the mines, and forms of application for shares, may be had at the offices of the company.

**C**ARNARVON AND BANGOR SLATE COMPANY (LIMITED). Registered under the Joint-Stock Companies Act.

Capital £100,000, in 10,000 shares of £10 each.

No call will exceed £1, or be made at intervals of less than two months.

DIRECTORS.—JOHN ROBINSON, Esq. (Chairman of the British Slate Company).

WILLIAM TUXFORD, Esq. (Director of the Great Laxey Mining Company).

THOMAS PARLEY, Esq., London and Liverpool.

HENRY EDEN SULLIVAN, Esq. (Director of the British Slate Company).

WILLIAM E. WILLIAMS, Esq., Architect, 56, Ludgate-hill, E.C.

JOHN KIRKHAM, Esq., C.E. (Director of the County and General Gas Co.).

BANKERS.—The Consolidated Bank (Limited), Threadneedle-street, London; Charing-cross, S.W.; and 46, Pall-mall, Manchester.

BROKER.—John Inchbald, Esq., 2, Calthorpe-court, and Stock Exchange, London.

SECRETARY (pro tem).—T. T. Jennings, Esq.

OFFICES.—5 and 6, SHERBORNE LANE, LONDON, E.C.

ABRIDGED PROSPECTUS.

This company has been formed for the purpose of working the celebrated Talyarn Slate Quarries, situated in Nantlle Vale, Carnarvon, as also other slate quarries in North Wales.

The property is about 70 acres in extent, and is held under a lease for 21 years, renewable for a further period of 21 years. The company have also the option to purchase the freehold of the estate within five years, should it be deemed desirable. There are seven large quarries fully opened on the estate, and several hundred thousand tons of slate have been made therefrom.

The slate rock is of the finest quality, and is of the colour and quality known as Bangor slates, being on the same veins as those running through the Penrhyn and Ashton Smith's Quarries.

The property is fitted up throughout with the most extensive plant and machinery for working purposes, including steam-engines, water-wheels, water-balances, inclines, stores and materials of every description.

There are also a large number of buildings and cottages for workpeople on the property, with a residence for manager, &c.; the rentals for these alone are upwards of £200 per annum.

The demand for slates has been steadily increasing for several years, and consequently there has been very considerable increase in the prices of the slates. A still further rise in the price of slates and slabs has taken place this month, and the demand is still far in advance of the supply.

The works are now being carried on, and all shares applied for will be allotted according to priority of application.

A plan of the estate and quarries is annexed to the prospectus, as also reports from the most eminent authorities on slate quarries, copies of which can be had with forms of application for shares, from the bankers, broker, or secretary of the company.

Reports and extracts from reports enclosed from Griffith Ellis, Esq. (manager of the quarries of the late Ashton Smith, Esq.); John Francis, Esq., jun. (manager of the quarries of Lord Penrhyn, late Col. Pennant

although it may seem hard to the shareholders to have a compulsory winding-up thrust upon them, yet, on consideration, everyone must feel that it was through their default that the creditors were in a disagreeable position, and were enabled to invoke the aid of the Stannaries Court. Under all the circumstances, justice has been satisfied by the learned Vice-Warden's order, affirmed as it has been by the decree of the Lords Justices.

## CONDENSED PEAT FUEL.

The subjoined report refers to a series of important experiments made by Messrs. Field (Chandos Chambers, Adelphi), with peat condensed by Prof. Wolffram's patented process. The experiments were made in the presence of several gentlemen interested in the subject, and among others there were present Prof. Wolffram, Dr. Lampriere, and Messrs. Bindley, Coote, Wise, &c. As this is a question in which the readers of the *Mining Journal* are specially interested, the report of Messrs. Field is published *in extenso*:

"We hereby certify that we have tested a quantity of peat prepared by Messrs. Wolffram and Co.'s patent process, under the conditions and with the results hereinafter mentioned, the object of the experiments being to demonstrate the practicability of employing for steaming purposes even very inferior peat, when prepared according to Messrs. Wolffram and Co.'s patent process, by which it can be produced in a marketable form at a moderate cost. Our experiments were conducted with a Lancashire boiler 20 ft. long by 6 ft. 6 in. diameter, the diameter of each flue being 6 in., and the total net fire-surface being 40 square feet. The blocks of peat were packed in sacks each containing 13 cwt. of fuel in the question. The experiments were commenced at half-past eleven o'clock A.M., and lasted till eight o'clock P.M., thus covering a period of eight and a half hours, during which time 18 sacks or 31½ cwt. of peat was consumed, and 1584 gallons of water evaporated. As the boiler is kept in constant work day and night, coal fire was burning at the time of commencing the experiments with the peat, but due allowance has been made in this respect by considering the experiments as having terminated at a time when the peat fires were similar in condition to that of the coal fires at the time of commencing the experiments, thus giving no unfair advantage in favour of the peat. The level of the water in the boiler was carefully noted at the commencement of the experiments, and was at the same height at their conclusion. The quantity of water evaporated was accurately measured in a tank from which the boiler was supplied, the water fed to the boiler being cold. The blocks of peat used are exceedingly sound, and by reason of the peculiar process adopted in their preparation they are very portable, not having the slightest tendency to crumble in transit, which we deem an important feature, while we may add that they produce a most excellent fire, such as we consider in some respects superior to a coal fire, notwithstanding that the blocks used on the present occasion were prepared from peat of very inferior quality taken from the upper stratum, and not from the lower stratum, which latter would be selected as steam fuel, and would undoubtedly give very much better results. The boiler was performing its regular work while the experiments were being conducted, during the whole of which time an abundant supply of steam was steadily maintained. The evaporation, as will be seen, is below that of coal, but taking into consideration the enormous available quantity of peat in many districts, combined with the very low price at which it can apparently be prepared by the patent process, and also bearing in mind that the peat tested on the present occasion was, as before stated, of very inferior quality, we consider that the patent prepared peat possesses important properties, which bid fair to bring it largely into use."

Chandos Chambers, Adelphi, Feb. 8.

EDWARD FIELD.

## FOREIGN MINING AND METALLURGY.

The putting in vigour of the decision of the Charleroi Committee of Forgemasters has been attended with some regrettable facts. The workmen concerned have gone on strike, and have displayed their discontent with a violence which has never before been seen in Belgium. We need scarcely recall circumstances with which the public has been made familiar through the medium of the daily journals, which have recorded the sad fact that it is by fire, pillage, and assassination that the workmen have spoken out against the decisions of their employers. Belgian metallurgical industry has been passing through a crisis, the first victims of which have been the employers of labour; the consequences of this state of affairs have reacted on the workpeople, but the violent complaints of the latter can in no respect whatever change the position of affairs; they simply constitute a public calamity, the results of which can only complicate the present situation. To give way to the mutiny of the workpeople would be to encourage them to recommend similar disorderly proceedings on some future occasion. The effect would be, besides, to prolong the present languishing state of metallurgy, while it is believed that the application of the measures adopted by the forgemasters can only exert a favourable influence on the present state of affairs. In spite of the recent tumults, the masters are carrying out in some parts of Belgium a reduction of 8 per cent. The rolling-mill of M. de Dorlodot, at Acoz, has resumed operations. The state of the market remains the same; the business transacted has been confined to the supply of current requirements, and has been of comparatively small importance. The depression appears likely to be prolonged, in spite of all the efforts made by industrials. At Liège the rolling-mills producing merchants' irons have a small current of orders. First class, Nos. 1, 2, and 3 are quoted respectively at 67, 12s., 7s. 4s., and 7s. 16s. per ton; in the case of contracts of a certain importance reductions would however, be made from these rates. Plates for construction purposes are quoted at 8s. 8s.; boiler-plates, at 9s. 4s.; and superior plates, at 12s. 8s. per ton. These rates are, however, almost entirely nominal, no business being done. The stock of pig is considerable, and does not diminish, but if the present state of affairs is still maintained there appears little reason to doubt that some furnaces will be put out of blast, as English pig continues to be offered on terms to which the forgemasters of the Liège basin cannot descend without loss. Pig made from scoria is quoted at 2s. 14s. per ton; white hard iron pig, at 3s. per ton; grey pig, at 3s. 8s. per ton; and casting-iron pig, at 3s. 16s. per ton. As regards railway plant, the situation is not better, and with the exception of some houses, which are executing old orders, work is generally wanted; and some houses have discharged a number of their workpeople. The John Cockerill Company, at Seraing, is paying a dividend for 1865-6 of 2s. per 40s. share. The Courcelles Nord Colliery Company commenced the payment yesterday of a dividend of 2s. per share, on account, in respect of the exercise 1866. The Haut-Fenu Colliery Company is paying a dividend for the exercise 1866 at the rate of 2 per cent. Meetings are announced as follows:—Trieu-Kaisin Colliery Company, Feb. 19, at Montigny-sur-Sambre; Belgian General Railway Plant Company, Feb. 21, at Molenebeek St. Jean; Andennies Metallurgical Company, Feb. 28, at Andenne; Quaragon United Collieries Company, Feb. 28, at Quaragon.

There is no material change to note in the French iron trade. Great works which are being carried out in France, Algeria, &c., induce hopes that there will be a fair consumption of French metallurgical products during the current year. The Comtey and Fourchambault Collieries Company has discovered a new bed of coal in its Montvieu Mine. Meetings are announced as follows:—Carvin Colliery Company, Feb. 17, at Carvin (Pas-de-Calais); Manosque Mines and Ironworks Company, Feb. 19, at Paris; Haute-Loire Metallurgical Mines Company, Feb. 28, at Yssingeaux.

The strike which has just troubled Belgian metallurgical industry has extended itself to the collieries in the basins of Charleroi and the Centre. The strike is, nevertheless, not general, and although it has manifested itself with great impetuosity, it may be hoped that it will not be of long duration; many miners have already returned to their work. The working miners of the basins in question have no motive for discontent, their wages having been sensibly advanced for some time past. Business has been much more quiet than in preceding weeks, and it is doubtful whether prices will long maintain themselves at the point which they have attained. In the Liège basin offers have been made at a reduction for important contracts. Colliery owners are preparing to carry out during the dead season, which is commencing, numerous preparatory works, which will have the effect of temporarily reducing the extraction at several points, but as the stock is generally nil, the fall which is expected will scarcely be of much importance. In the Charleroi basin the attitude of affairs is the same, but the position of the collieries has been complicated by the strike; although prices are maintained for the present, it is expected that they will give way. The deliveries by railway have been below the extraction in the basin of the Couchant de Mons, so that some stocks are formed in certain localities; the circumstance has exerted, however, no influence on prices, which are firmer than in other parts of Belgium. Washed coke has made 17. 4s. per ton; and unwashed ditto 17. 1s. 6d. per ton. The imports of coal into Belgium during 1866 amounted to 178,000 tons, as compared with 74,000 tons in 1865, and 65,000 tons in 1864. The exports of coal from Belgium, which amounted in 1864 to 3,300,000 tons and in 1865 to 3,500,000 tons, attained in 1866 a total of 3,900,000 tons. France absorbed almost the whole of these exports.

The sales of copper effected on the Havre market have been of some importance; 90 tons of disposable Chilian have been sold at 77s. to 77s. 10s. per ton. The present price is 78s. per ton, on which terms holders do not appear very anxious to realise; for future delivery 50 tons have changed hands for the end of March at 79s. per ton. Affairs have been moderate at Paris. English has made 82s.; Chilian, 78s. to 78s. 10s.; and Corocoro mineral, 81s. per ton. There has been but little movement on the Marseilles market, with the exception of copper in small ingots, which has been in more demand; there have been no changes in prices. At Hamburg holders, without seeking to raise their pretensions, do not make concessions on present prices. Stettin has remained without change. Sensible fluctuations have taken place in tin on the Dutch markets during the last few days. Thus Banca, which closed quietly a fortnight since at 51 fls., has regained a quotation of 52½ fls., at which price 1400 blocks have changed hands. The sale has also been noted of 100 blocks at 51½ fls., 2900 blocks at 52 fls., and 500 blocks at 52½ fls. At the last date the article had again become a little more quiet. The deliveries on the Dutch markets amounted in January to 10,900 blocks, as compared with 11,950 blocks in Jan., 1866, and 4230 blocks in Jan., 1865. The stock on schedules Jan. 31, 1867, was 120,209 blocks, as compared with 84,909 blocks Jan. 31, 1866, and 62,677 blocks Jan. 31, 1865. The unsold stock of the Society of Commerce Jan. 31, 1867, was 72,300 blocks, as compared with 125,933 blocks Jan. 31, 1866, and 108,598 blocks Jan. 31, 1865. The sale is mentioned at Havre of a lot of 461 lots of Straits tin at 90s. and 91s. per ton, Paris conditions. The article remains quiet at Paris, with a moderate demand. Banca has made 92s.; Straits 90s., and English 87s. per ton. At Marseilles tin has risen 4s. to 8s. per ton. On the Cologne and Berlin markets tin has been very well sustained; at Hamburg, on the other hand, the article has been less sought after, and has given way in price. There is no animation in the lead markets; transactions are as insignificant as formerly, and scarcely exceed the daily requirements of consumption. The prices formerly given are generally supported, but are considered as nominal on most of the markets, as for lots of some importance holders would readily make

concessions. The advices received with regard to zinc from the regulating markets indicate a relatively satisfactory state of affairs, although there has been less activity in transactions. The Breslau market has remained quiet, but it is hoped that as soon as the navigation is regularly re-established more activity will prevail. At Hamburg there has been but little business, but prices are firmly sustained. The Paris market remains quiet, there being but little activity in the demand; rough Silesian has made 23s. 4s., and zinc from other sources 23s. per ton.

What pre-occupies Prussian industrials most just now is the great insufficiency of railway plant, an insufficiency which has occupied the attention of the Chamber of Deputies. There appears to be little doubt that in districts in which the traffic is so considerable as Lower Silesia and the Bas-Rhin the want of plant is a veritable calamity. Reiterated complaints have been made on this subject, but have hitherto not been attended with any result. Some lines—and among them the Cologne and Münster and the Berg and Mark—have taken the initiative in regard to an increase of plant; but what are augmentations of detail in presence of the great development which industry has taken for some years in this part of Europe? Thus, in 1845 the value of the coal extracted in Prussia was only 900,000t., while in 1865 it attained an aggregate of 4,500,000t., for a total of 18,500,000 tons of coal extracted from 2581 collieries. If we take account of the production of 1421 ironworks, which amounted to 3,300,000 tons, the justice of the complaints made by local industry will be fully appreciated. In 1865 it is stated that the goods wagons of the Berg and Mark ran 5,930,000 miles on other lines, while the wagons of other collieries ran only 2,830,000 miles on the Berg and Mark, showing a difference of 3,100,000 miles in favour of the trucks of the Berg and Mark. The cause of this great difference is the want of plant on the lines of Westphalia, Hanover, and Hesse; and the difficulties from which industry suffers can only be remedied by the adoption of general measures.

**COAL-CUTTING BY MACHINERY—PRIZES OF £800 FOR THE BEST MACHINES.**—With a view to encourage the development of coal-cutting by machinery, the Association of the Colliery Proprietors of South Lancashire and Cheshire have decided to offer three very handsome prizes to the inventors of the best machines for the purpose. The machines submitted for competition are to be supplied not later than Nov. 1, and they will then be practically tested in the collieries before a committee appointed by the association for that purpose. The committee will by this means ascertain which machines are most suitable to the requirements of the trade, and prizes of 500s., 200s., and 100s. respectively will be awarded to the three best. That the existence of a practically useful machine will place the coalowners in such a position that they will be less at the mercy of their workmen is beyond question; but it does not by any means follow that the introduction of machinery will be injurious to the workman, unless he himself makes it so. The value of such a certificate as the winning of even the lowest of the three prizes would be, as to the merit of a machine, beyond estimation, the association being composed exclusively of gentlemen, whose reputation for integrity and honour is universal, and whose practical knowledge is acquired from their habitual occupation being the actual management of the collieries in which they are interested. A better opportunity for obtaining an indisputable proof of the practical value of an invention has seldom, if ever, been offered to inventors. The advertisement offering the prizes will be found in another column, and the regulations, &c., for competing will be published in next week's *Journal*.

**ECONOMIC GENERATION OF STEAM.**—An improved steam-boiler has recently been invented by Mr. THOMAS HOLT, of Trieste, Austria, which consists in the arrangement of a number of rectangular or other shaped spaces around the central flue, or flues, and in direct connection with the furnaces, increasing the effective heating surface to nearly three times that of the best boilers yet made. These spaces, or discs, being formed of straight plates, joined to the longitudinal tubes, or flues, passing through the boiler insure a direct and efficient draught, thus promoting the mixture and combustion of the gases, and giving a greatly increased evaporation; especially as no through stays are used in the water spaces over the fire, all possible chance of leakage being thus done away with. From the much larger extent of heating surface, no forcing of the fires will be necessary, and as each part of the boiler evaporates an equal amount of water, there can be none of that destructive wear and tear as in the boilers of the present construction. The internal parts of the boiler are made by machinery, and being thus necessarily duplicates of each other will greatly facilitate repairs when such become necessary. The invention is also applicable to locomotive and all other description of boilers.

**MINING AS AN INVESTMENT.**—In last week's *Journal* we commented at some length on the position of the mining industry of the country, as respects capital invested and dividends paid, and in another article drew attention to the necessity and advantage of working what are commonly termed "poor ores," so that all mines might be made profitable. We have now further to allude to the latter subject, which is one of so much importance, by stating that the Alderley Edge Company have declared a dividend of 5s. per share for the last three months of 1866, which, upon 107 shares, the amount paid is, of course, equivalent to 10 per cent. per annum. Alderley Edge is essentially a mine of poor ores, and the average yield is not above 1½ per cent., yet the system of treatment is such that this division of clear profits is made periodically, and they have returned to the proprietary no less than 87. 12s. 8d. per share on 107 paid. This is a case in point, and a most encouraging one—an example which, we trust, other associations will follow, and so produce profit where hitherto there has only been expenditure and disappointment. At the Rio Tinto Mines, in Spain, we know that special attention was paid to the "small" and sulphates formed by the decomposition of the mineral, which were treated by cementation, and in eight years no less than 1830 tons of copper were produced, or about 250 tons per annum. Various other instances may be adduced, tending to the same end, but the company which is in course of formation for this purpose, as previously explained, will show the advantage to be derived to the shareholders, and that it is practicable to make all mines remunerative where even poor ores alone exist.

**BRITISH MINES.**—The mines of England were assessed, for income tax purposes, at 2,657,975, in 1855-6, at 2,694,461, in 1856-7, at 3,485,150, in 1857-8, at 3,548,923, in 1858-9, at 3,658,517, in 1859-60, at 3,802,201, in 1860-1, at 3,906,473, in 1861-2, at 3,987,395, in 1862-3, at 4,046,527, in 1863-4, and at 4,276,507, in 1864-5. So much for English mines. The mines of Scotland were assessed, for similar purposes, at 328,089, in 1855-6, at 311,583, in 1856-7, at 337,219, in 1857-8, at 356,938, in 1858-9, at 393,290, in 1859-60, at 450,225, in 1861-2, at 44,832, in 1862-3, at 469,310, in 1863-4, and at 466,839, in 1864-5. The mines of Ireland were assessed, in 1861-2, at 79,412s.; in 1862-3, at 83,471s.; in 1863-4, at 55,949s.; and in 1864-5, at 85,983s. The mines of the United Kingdom were thus assessed in 1855-6, at 2,986,064s.; in 1856-7, at 3,006,044s.; in 1857-8, at 3,822,369s.; in 1858-9, at 3,886,352s.; in 1859-60, at 4,015,455s.; in 1860-1, at 4,195,491s.; in 1861-2, at 4,436,110s.; in 1862-3, at 4,515,698s.; in 1863-4, at 4,571,786s.; and in 1864-5, at 4,829,389s. The figures for the first six years, it will be seen, refer to Great Britain only.

**RAILWAYS IN RUSSIA.**—It is announced that the whole length of the Dunaburg and Witepsk Railway is now complete, the contractors, Messrs. Peto, Betts, and Co., having finished their work more than a year sooner than stipulated in the conditions; while the cost of the line itself will be less than estimated. This is altogether most important, and will give great encouragement in getting the necessary funds for the new project, now to be introduced, the Witepsk and Orel, which, in fact, is a continuation of the former, and will carry railway accommodation about 330 miles still further, and into the mineral districts of Russia. The original concession of this extension was granted to Mr. Hammond, who transferred his privileges to Sir Morton Peto; therefore it is only reasonable to suppose that the same enterprising contractors will have the control of the works, and the result, it is to be hoped, will be same as that which has attended the Dunaburg and Witepsk. The Government of Russia guarantees 5 per cent. on 6,582,500s., which will be more than sufficient for the construction of the whole length, or about 20,000s. per mile. There is a proposition under discussion, we hear, for the amalgamation of the two projects, or rather the transfer of the line now to be made to the company which has completed the first; but some rather vexatious lawsuits are spoken of, which, if we are correctly informed, do not do credit to persons interested with the concessionaires, as the object, it is stated, is to avoid fulfilment of small obligations which were entered into with persons primarily associated with the project, who were instrumental in bringing it into vitality, and placing the objectors in the beneficial position they now occupy. It

is remarkable that such trifling things should be allowed to impede, or in any way compromise, the status of an undertaking which involves the expenditure of 61 millions sterling, and which must leave ample margin for the proper and just remuneration of all parties.

## GREAT NORTH LAXEY MINING COMPANY (LIMITED).

It is with much regret that we have to allude to the insertion in last week's *Mining Journal* of a report of a meeting of a few shareholders in the above company, said to have been held in the Isle of Man. We have since had an opportunity of ascertaining the facts of the case, and are convinced that the statements and charges made are unjustifiable and unfounded.

It is evident that the parties who called that meeting had no intention to be impartial, for they sent no invitation to attend to some of the largest and more influential local shareholders, such as the Chairman and the secretary of the Great Laxey Company, nor to Capt. Rowe, also a large holder, and who could at once have replied to and explained any misstatements made. This shows the intentional exclusive character of the meeting, and the hostile spirit which actuated those who encouraged it. It proves that there was a premeditated desire to promulgate certain statements and publish them extensively, before any answer could appear to them.

Again, if these parties felt so strongly as to the management of the mine, how is it that they became shareholders? We are informed that all of them have joined the company only since the last general meeting, more than a year after its formation, while from living on the spot they had special knowledge as to the efficiency of the management, and probably knew as much of the history of the mine as they do now. But one of the leaders at the late meeting stated that it was the fall in the price of the shares since they had purchased which had led them to enquire into the management. Firstly, are the shares of this company to be exempt from the general unprecedent depression of the last eight months? But it so happens, we believe, that the rise in the price of shares at the time alluded to was caused by a report from one of the agents, now selected by these very persons, in which he said that the lode at the shaft was improved to 6 tons of lead per fm., or double what it was valued at by Capt. Rowe, but which opinion was neither confirmed by that of others nor by results. It was then that most of those now expressing dissatisfaction bought their shares, and surely they would scarcely have done so if the agent alluded to had stated the same views of the management as he does now. The readers of the *Journal* may remember that we then alluded to the numerous complaints made by shareholders who had received letters from persons who were strangers to them, offering to buy their shares at 25s., and in two or three days afterwards had letters from the same parties stating that, as they intend to hold, they would be glad to hear that the lode has improved to 6 tons per fathom (reported at the office to be only 3 tons), they having had the mine privately inspected, and that the shares closed 35s. to 40s." This second letter was, we presume, not written to those who had just accepted the offers at 25s.!

But who are the agents on whose reports such accusations are now made? We are told that they are "Capt. Kitto, of Snailbeach, and Capt. Bawden, of Foxdale." Now, it is well known that Capt. Kitto was summarily dismissed from the under-agency of the Great Laxey Mine some time ago, and it is equally notorious that since then he has shown much inimical spirit to Capt. Rowe. Then we have Capt. Bawden, "of Foxdale," an assertion calculated to mislead, for Capt. Bawden has had no connection with the Foxdale Mines for several years, having been "removed" from their management at that time, and we shall presently see to what extent his former expressed opinions are consistent with those now imputed to him.

We are informed that in September last a letter was received at the office from a Mr. Cubbon, of Douglas (who seems to have taken a prominent part at the late meeting), in which he professed to speak for himself and others in the Isle of Man, and said, respecting the mine:—"We are very much dissatisfied with the mode in which it is managed by the parties working it here." To this the secretary replied that the letter would be laid before the directors, but naturally and properly added, "Will you be good enough to let me know on what grounds the present management of the mine is objected to?" On Sept. 24, Mr. Cubbon answered that it was intended to hold a meeting of "the insular shareholders (which would mean all of them, but which has not been done) in a short time," and that he thought it better to defer the particular grounds until then. In the meantime the directors applied to Mr. Warington Smyth (the mining engineer for the lessor, who had just made his annual inspection) for his opinion, and also obtained the report of Capt. Jas.

the mine is leased), after his last official inspection, was applied to for his opinion, it being considered that not only was he a high authority, but one whose peculiar position was really to see that the mine was properly, efficiently, and vigorously worked. And what did he write? In September last he says—

"He found the progress made in the operations since last year very satisfactory." And, also, "that all is being done towards developing the mine in a way that is consistent with fair economy."

In another letter, in October, he said—

"It seems to me that if dissatisfied persons wanted a change they would easily get a more expensive, though I doubt if a more suitably efficient management."

A Mr. R. Sherwood appears to have been the "great man" of the occasion, for not only did he make three speeches, but to him had been entrusted the task to "go through the reports and papers, and to glean from them what information he could." Well, he gave a series of extracts from different reports over some years, and the most prominent feature in them is the steady and consistent opinion of Capt. Rowe that "depth" was the great object, and the inference certainly is that he did all that could be done to carry out his own views, so repeatedly and urgently enforced. But, then, this same Mr. R. Sherwood proceeds to criticise and throw discredit on the report of Capt. Paul and the letters of Mr. Smyth. Now, if there is one absurdity greater than another, it would be to make a comparison between the two agents of the "Manx fraternity" and the two gentlemen we have named. Nothing that Mr. Sherwood can say can affect Mr. Smyth, nor is there any defence of him required of us. But we cannot help noticing the disingenuous way in which Mr. Smyth's remarks are treated.

Captain Rowe's management of the mine was attacked. Not only was it complained that his expenditure was extravagant, but also that he did not work the mine properly, and that the shaft had not been sunk as rapidly as it ought and could have been done. Mr. Smyth distinctly approves in the strongest terms of the "progress made," and adds, "that all is being done towards developing the mine in depth that is consistent with fair economy." But these wise men of the island endeavour to shut the eyes of the shareholders to these important and independent remarks, by saying that Mr. Smyth knew nothing about the accounts. Mr. Smyth was never asked for his opinion on the accounts, but solely as to the way the mine was worked. It appears that one of Mr. Sherwood's friends was "not satisfied" with Mr. Smyth's letter, so this individual wrote to him for an explanation. And how does Mr. Sherwood describe the answer received by his friend? He says—

"It turned out from his last reply that he (Mr. Smyth) knew nothing whatever of the expenditure charged against the company, but that he had merely reported so because he could not see any extensive outlay about the mine itself. So that if the money of a company is spent, and there is very little to show for it, this, in his opinion, is a proof of economy. The less we can see for our money the better he thinks the management ought to be appreciated. Could anything be more unjustifiable than such a statement made by a man in his position? As I said, his letter was worse than worthless."

We would ask, can anything be more unjustifiable—aye, and more disgraceful, than this construction of Mr. Smyth's letter? We are enabled to give a copy of it, and it is as follows:—

"28, Jermyn-street, London, Jan. 22, 1867.—SIR: I have yesterday received your favour of the 17th inst. My annual inspection of North Laxey Mine since it was first commenced has enabled me to form an opinion of the judicious character of the workings. I have seen no extravagance there, either in over high prices for ground, in apparatus, or buildings; but my opinion simply extends to the affair as a mine. I have never made—as it is foreign to my duties—an enquiry into other charges that may have been incurred by the company.

"That the lode has not turned out better, and has so far only given you a promising and not a paying mine, is I believe the fault neither of the agents nor of the men."—To D. E. Gelling, Esq."

W. W. SMYTH.

We will leave our readers to form their own opinion of a man who can so deliberately and shamefully misrepresent statements to support an accusation against another.

After this, it is scarcely necessary to refer to the words in which this Mr. Sherwood dismisses Captain Paul's report—that "it is not worth anything more" than Mr. Smyth's. Why did not Mr. Sherwood's friends write to Capt. Paul for explanations? or why do not they write to Messrs. John Taylor and Sons, in whose employment he has been for many years, and ask them for an opinion of his practical ability and experience, his integrity, and the value to be attached to his report?

With regard to the expenditure, it was stated at the meeting that "our 15 fms. sinking and 98 driving have swallowed up about 5000*l.* of the capital, and about 1000*l.* of the lead sold." Independent of the fact that the sinking has been upwards of 20 fms., the sum of 1300*l.* was paid for the mine and plant, then there were the law and other legitimate charges in forming the company, the royalty, the costs of stopping the ground, and of dressing the ore for market, sundry labour (which includes timbering the shaft and levels, drawing and landing the stuff from the mine, putting in penthouse and pump-rods, &c., amounting to a considerable sum), the new wheel-case, timber and other supplies, and a new road, respecting which Captain Paul reported—"About two miles of a new road leading to the mine is formed out, and partly made, which has cost a good deal of money. The whole expense to complete it will, probably, be about 350*l.* or 400*l.* This road will be of great benefit to the mine for the conveyance of materials, ore, &c., to and from the mine." To the above items have to be added the agencies, and expenses of management, which, though very moderate, will, of course, in two years, make a total not to be omitted.

Not one word of all the above is noticed at the meeting, but the shareholders are told that 15 fathoms sinking and 98 fathoms driving have cost about 5000*l.* of the capital, and about 1000*l.* of the lead sold, a statement devoid of truth. We understand that the directors will lay before the shareholders a full and detailed account of the whole expenditure, together with satisfactory evidence of its correctness, so that any impartial and disinterested person may have no ground of complaint.

Allusion was made at the meeting to the new wheel in course of erection, and what was called a "move" to resume the sinking of the north shaft. With regard to the former, Kitto and Bawden ought to have known that as the mine is deepened more power will be required for hauling as well as pumping. The new wheel is being gradually erected, so that when necessary it will be ready to do the pumping, and the present wheel devoted to drawing only. With regard to the sinking of the north shaft, it depends on the result of further working to ascertain how the ore is found to extend north. Unless it is really necessary for the proper opening of the mine, it will certainly not be done. But if it should be necessary to sink that shaft it will, probably, be accomplished without the aid or expense of pitwork, as the deeper levels coming up from the south shaft will, probably, drain it. The attempt to frighten the shareholders by holding out the bugbear of a heavy uncallable expenditure on these points has, therefore, no foundation.

We now come to notice the statements made on the purchase of the mine, and the formation of the present company, which led to remarks perfectly irrelevant to the management, and we only allude to them as additional proofs of the recklessness with which the assertions have been made. It is also worthy of remark that of all the shareholders now in the Isle of Man only three were holders in the old company, including Capt. Rowe, and we believe that one of the chief grounds of soreness is the disappointment of some at least of the complainants that they failed in their tactics to secure the mine, at a less price than it actually sold for.

A person at the meeting gave a statement which purported to be the sum "expended on the mine" to the end of 1864, amounting, he said, to 17,950*l.*, and he went on to observe that in the prospectus of the present company it was stated that 15,000*l.* had been expended on machinery and in working the mine; and he added, with all the self-complacency in the world, "leaving 2950*l.* to be accounted for." He has the satisfaction of having discovered what is vulgarly termed "a mare's nest," evidently not the only one he has found. He has really drawn attention to the cautious manner in which the original shareholders of the present company drew the prospectus. They knew the total amount of previous expenditure to be about 17,000*l.*; but they also knew that royalties, agencies, and other items could not be called sums "expended on the mine," and allowing for all such contingencies, they thought that they would not be exaggerating the case in favour of the new proprietors by showing too large an expenditure on the property if they gave it as "about 15,000*l.*" The allusion to such a point is only an additional proof of the desire to prejudice the shareholders against individuals.

And now with regard to how the mine was purchased, and by whom. In July, 1864, it was resolved to wind-up the old company, all the capital having been expended, and the shareholders having declined to find more, notwithstanding the favourable opinions expressed by Capt. Rowe and others. In fact, the mine had really for a long time been carried on by a very small number of the shareholders, who had subscribed for the preference shares. The parties who did this were principally the then directors, the secretary, and Capt. Rowe. Every exertion was then made to reconstruct the company, and the shareholders in the old one were urgently recommended to subscribe a further sum for the purpose of saving, if possible, the money they had expended, and obtaining the good results held out to be probable. Advertisements were issued, and prospectuses were circulated, but with no effect either among the old shareholders or others, almost the only one who agreed to join being Capt. Rowe, who applied for 250 shares. Time was going on, the liabilities were increasing, and the liquidators were getting uneasy as to their being able to realise sufficient to pay the creditors in full; while, though authorised by the Act of Parliament to carry on the operations, they did not feel justified in doing so for an indefinite period, and at the expense of the creditors. In October a final appeal was made to the old shareholders, a circular being then again sent to them, together with a further report from Capt. Rowe, in which he valued the lode in the shaft at 2 tons of lead per fm., and said that the regular run of ore was improving by going north as well as south. He also stated that the 60 fm. level continued to look well, and that they never had in the upper levels a lode so wide and so productive, &c.

No result came of this, and the liquidators then took steps to dispose of the mine and plant on the best terms they could. They not only brought the matter before parties privately, but also advertised the property for sale in the *Mining Journal*, Isle of Man, and other papers. After waiting and negotiating with different parties for some time they ultimately accepted the highest price offered; and had any of the other offers been accepted the property would not only have fetched less than it did, but it would have fallen into hands principally having no previous interest in it.

At the recent meeting it was stated that the mine was purchased by Capt. Rowe and the secretary, which, if it meant by them alone (evidently intended) was simply untrue. The real fact was that about thirteen persons previously agreed to subscribe a certain sum to buy it if it could be got; and, notwithstanding the assertion of Mr. Cubbon that only one or two of the promoters had been shareholders in the old company, it so happens that out of the thirteen there were actually ten of them who had been among the largest holders of ordinary shares, and also of the preference shares, through which latter alone the mine had been carried on for about two years. These thirteen purchasers themselves formed the new company, subscribing in the aggregate for a fresh capital of 12,500*l.*, of which they called up at once 6250*l.*, and charged for the purchase the exact sum they gave—viz., 1300*l.* It is somewhat strange that while the said Messrs. Cubbon and Sherwood professed to give an accurate account of this affair, one of them has since written to the office to know what the correct version is—a further specimen of the extreme recklessness which has characterised the charges which have been made.

A company was thus established, with new blood and connection introduced, and with a large sum subscribed, free of liability, possessing a property which had been uninterruptedly spoken of in favourable terms, and situate in the immediate neighbourhood of a rich and very profitable mine, the shares of which had at that time just risen from 3*l.* 10*s.* to 20*l.* When the Consolidated Bank suspended payment its shares, with 4*l.* paid, notwithstanding the valuable business and connection it possessed, fell to a nominal price, if they were not entirely unsaleable. But when fresh capital was introduced, and the bank re-opened, the shares at once rose to a premium. The

transition of the Great North Laxey Mine from the hands of liquidators without funds or assets to a state free from debt, a large sum in hand, and a further amount in reserve to develop it, was even more important than the change in the Consolidated Bank. Looking, therefore, at the whole of the circumstances stated, and others which might be added, such as the fact that the new company could prosecute the operations with little delay in preliminary works, and that influential parties connected with the share market had for the first time become interested, it was not surprising that the shares were valued at about 3*l.* per share; and we have seen, as mentioned in a previous part of this article, that more than a year after the formation of the company they went to that price again, on the rumour of an improvement at the shaft.

The shareholders will now be able to see through the plausible but groundless accusations made against the present management, and we are convinced that it would be the ruin of the company if the parties referred to obtained the smallest control in its affairs. We are glad to hear that the mine bids fair to realise the success predicted, and under the present management we have no doubt it will be carried on with due vigour, efficiency, and economy.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

FEB. 15.—There is an improvement in the demand for iron, and a fair amount of orders have been given out this week. It is satisfactory to find that a degree of recovery is taking place in the shipbuilding trade, which is causing a somewhat increased enquiry for plates, the demand for which has long been very slack. The low price of money is bringing out contracts for rails, upwards of 11,000 tons being advertised for by the directors of the Madras Railway Company, and 1500 tons of rails are required by the Lancashire and Yorkshire Railway Company. These orders are not likely to be taken in Staffordshire, but they will tend to strengthen the trade. On the whole, though the reduction in price did not for some time appear to stimulate purchases, and though the works are yet far from being fully supplied with orders, the tide appears to be turning, the only important doubt being as to the future course of the American demand, should, as seems likely, the very high Tariff now before the Senate be finally adopted.

The Commission to enquire into the question of Combinations of Masters and Workmen receives general approval. The fact is that this question of the combined action of these two great elements of our productive organisation has become an exceedingly serious, not so say a vital, matter.

The legal aspect of the question, the extent to which these associations exist, and their constitution and mode of operation will form important preliminary questions on which to enquire; but probably the great benefit which the commission will confer will mainly arise from discovering what antecedent circumstances have led to the formation of these Unions—how far, and under what conditions, the combined action of men and masters may be necessary, what are the limits of their legitimate operation, and what the results of their exceeding it. One party too hastily say that such combinations are totally unnecessary, and produce nothing but evil; the opposite party consider that there is scarcely a limit to their power, and seek to widen the range of their action, and to make them as extensive as the civilised world, so that the free action of the individual man may be exchanged for the will of the ascendant majority. Both these extremes are wrong.

Combination is natural, perhaps necessary, and may be beneficial, but like all human arrangements, it is exposed, indeed peculiarly exposed, to run to excess—to step beyond its legitimate sphere, and to seek to set aside laws by which Providence directs the social system.

Two of the members of the commission belong to this county. The Earl of Lichfield is Lord-Lieutenant of Staffordshire, and is admirably suited for the position.

He is very intelligent, impartial, and painstaking, and has always manifested a deep interest in the welfare of the lower classes. He is, however, no chimerical philanthropist, but will scrutinise with keen judgment every suggestion which may be offered to the commission. Mr. William Mathews, another member, is one of the oldest ironmasters of South Staffordshire, and is the Chairman of the Mining Association of Great Britain. He is a gentleman of very great experience, and very shrewd and sagacious. He has always adhered to the Liberal side in politics, and whilst representing the masters will be found, no doubt, to give careful heed to the ease of the workmen.

A very singular accident occurred at Twidale, near Dudley, yesterday, in a limestone pit belonging to Messrs. Bagnell. The pit has not been worked of late, but being in connection with some coal measures is examined from time to time. Some crowns-in have been recently noticed. John

Woodward and James Rhodes, two middle-aged men, went down to the workings at noon, yesterday, to examine the state of the roof. With the too usual recklessness of miners, though going to a place which had not been lately examined, they took naked lights. Some gas, which it is supposed had penetrated by breaks from some of the coal measures, was ignited, and an explosion of great violence occurred. The skip was blown 50 yards above the top of the shaft, which is itself 12 yards deep. Steps were at once taken to rescue the two men, should they—as there appeared little hope—yet be living. Two men, named William Price and James Henley (belonging to a neighbouring colliery), volunteered to descend in aid of the men who were in the mine. After going down a distance of 100 yards they were compelled to return, in consequence of the vapour, which was ascending in clouds from the mouth of the shaft. After a lapse of a short time two engineers, in the employ of the firm, named William Squires and Edward Fisher, descended the smoking shaft, and rescued Woodward, after Rhodes had managed to hold upon a wind-rose and "horse," which had been lowered for his assistance. Both men were seriously burnt, but being out of the way of the great mass of the gas, it is hoped, they may recover.

A handsome new station has just been opened at Crewe, which has been built by Messrs. Parnell, Son, and Bennett, of Rugby, at a cost of about 36,000*l.* A deviation line, about a mile long, is also being made north of the station, for the Chester line, which at present passes through the Crewe Works, and the traffic on which is a good deal interfered with, on account of the requirements of those extensive works. Very extensive shopping is being added to the already great pile in which the manufacture of steel rails, locomotives, and carriages, &c., is conducted at this rapidly growing railway town.

DUDLEY GEOLOGICAL SOCIETY.—At the ordinary monthly meeting a paper was read by Mr. Henry Hill Beckett on the "Laurentian System of Canada." Mr. Beckett was for some time engaged under Sir William Logan in the geological survey of that colony, and considerable interest was excited at the Bath meeting of the British Association by a paper which was read by that gentleman upon some peculiarities of these rocks. The Laurentian mountains occupy a great range of country on the northern side of the estuary of the River St. Lawrence. The heights of this range vary, but their general elevation may be taken as from 1500 to 1600 feet. In the Canadian nomenclature of rocks local terms have been adopted, as in our own immediate district, but their strata have to a great extent been identified with the Devonian, Ludlow, Wenlock, Llandover, Bala, and Caradoc beds, &c., of this country. They consist of a series of metamorphic sedimentary strata, which have been recently recognised by Sir R. Murchison as analogous of the fundamental gneiss of Sutherland and parts of Scotland. These rocks have been metamorphosed into a highly crystalline state, and are composed of felspathic assemblages, curiously interstratified with masses of quartzite and limestone. They vary in colour according to their peculiar chemical compositions, which were explained by Mr. Beckett. From the external appearance of a portion of them they are liable at first sight to be mistaken for igneous rocks of an intrusive character, instead of altered sedimentary masses. The quartz parts of some of these rocks occasionally exhibit pieces of immense size, two of which, nearly pure, may be seen in the district of the Rouge, a tributary of the Ottawa, one being 418 and the other nearly 600 ft. in thickness. The hornblende also forms a massive part of the rocks. The primitive limestones are generally crystalline, and sometimes are composed of crystals of carbonate of lime, with facets an inch square. They are generally cross grained, sometimes saccular, but rarely sufficiently fine in texture for stony marbles. Their colour is generally white, though often barred with grey, and occasionally entirely so. In the series here spoken of, the gneiss largely preponderates, but somewhat higher in the series, near Lake Cabalogue, a bed of white crystalline limestone may be seen upwards of 100 ft. thick, with hornblende gneiss above, and a mass of intensely-black hornblende rock below. This has in some parts the aspect and composition of closely-grained greenstone, and it is estimated to be more than 200 ft. thick, which is again overlaid by limestone. The valleiferous layers in the forms of galena and copper pinks are occasionally met with, intersecting the Laurentian rocks, but the quantity of the copper does not seem to be abundant. The veins all intersect the limestone, but it has been satisfactorily ascertained that their age is far more recent than the Laurentian epoch. As regards the possibility of the strata of some of these rocks embodying animal life, it was for a long time considered doubtful, but Prof. Dawson, in a paper read before the Geological Society of London, has expressed his belief in, and almost completely demonstrated, the organic origin of some of the Foraminiferal forms observed in portions of the rock submitted to his examination. We understand that a party of members of the Geological Society is about to visit one of the coal pits at Hilly, belonging to the Earl of Dudley, where the workings have been driven out by Mr. Spence into contact with the great western or Permian fault.

#### REPORT FROM NORTHUMBERLAND AND DURHAM.

FEB. 14.—The Coal Trade continues to prosper, and the men are well employed, and are earning good wages at most of the works. The coals sent out of the Tyne in 1866 amounted to 4,908,663 tons, 2,388,218 tons having been exported to foreign ports, and 2,520,445 tons sent coastwise. Sunderland sent out 2,803,178 tons, 1,110,022 tons having been exported, and 1,693,156 tons having been sent coastwise, so that 7,711,841 tons have been sent out of the Tyne and Wear in the year. The quantities sent by the leading ports stand thus:—Newcastle, 4,908,663; Sunderland, 2,803,178; Cardiff, 2,724,514; Liverpool, 852,467: total from these ports, 11,285,822 tons.

The new winning of Mr. Cochran, near Brancepeth, has been successful, and a good coking seam of coal discovered. The thickness of this seam is 2 ft. 11 in., only a thin seam, certainly, comparatively speaking; but this valuable coking seam is considered good in that district when it reaches 3 ft. and upwards.

The frightful nature of the accidents in coal mines does not deter reckless men from infringing the rules made for their safety. A few days ago three lads were charged at Seaham with breaking the rules of the Seaham Colliery; one of them was charged with having a tobacco-pipe in his possession while in the workings of the colliery, and the other two boys were charged with having commenced to hew coal contrary to orders given to them, and with having, while so doing, smashed their lamps—that is, their safety-lamps—so as to render them useless and also dangerous. All of them were severely reprimanded by the Bench for their conduct, and were also fined 10*s.* each, and costs.

The Iron Trade, we are sorry to state, continues in a rather pitiable condition; the make of pig-iron in the district, it is too evident, is much in excess of the demand. The dull state of the local puddling furnaces, rolling mills, &c., contribute their full share to bring about this disagreeable state of things, and the export trade does not make up the deficiency. It is not difficult to see what the end of all this is to be—a reduced make, with falling labour markets, are events evidently looming in the future, and every day furnishes fresh proofs of the short-sighted policy which induced the men to enter into a protracted strike in the face of a falling market last year. Most of the foundries, puddling furnaces, and plate and bar mills continue extremely dull; there are exceptions, but the above description, unfortunately, applies to the majority of cases. The iron trade as yet appears to give no sign of any great revival; on the contrary, it is probable that some of the furnaces will shortly be extinguished.

Messrs. Ray Brothers, of Vulcan Ironworks, Sunderland, have just added a powerful lathe, as well as a very superior slotting-machine, to their works, where already they had the largest steam-hammer in Sunderland, and several other additions are in contemplation, to meet the demands from the Continent and elsewhere.

#### REPORT FROM SCOTLAND.

FEB. 13.—A decision in our Sheriff's Court here, which has just been made public, may prove of importance to our readers. It is a decision on the law of contract, and the case was raised at the instance of J. A. Snell v. Topping, Goodwin, and Co. The defendants purchased from the pursuer 20 tons of Middlesbrough pig-iron, which was to be delivered within four or five days at Motherwell. There was no delay in delivering the iron to the railway company, but great delay occurred in conveying the iron

of producing far exceeding present demand, and prices are, consequently, low—indeed, there is a disposition not to quote prices unless when specifications are offered.

The coalmasters have done, and are doing, a good trade at high prices. The miners are gradually having their wages reduced 6d. a day—district following district in quick succession; while the colliers are being coaxed and courted into adopting a uniform standard of eight hours a day throughout the country. There is the expectation of a reduction in coals, both for home use and shipment; but gas coal is in demand at present high rates. The shipments of the week are 25,530 tons, against 21,565 tons in the corresponding week of last year. The examination of Peter Drummond, mineral oil manufacturer, Lambhill, about two miles from Glasgow, took place in the Bankruptcy Court here on Monday, but nothing of any importance was elicited.

There is a little more activity in our shipbuilding yards, but employers are of opinion that a reduction of wages over the whole departments must precede any very great activity.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

FEB. 14.—There is now every prospect that in a very short time the dispute in Derbyshire will have come to an unexpected termination, and work resumed at all the collieries. The strike has brought out some singular features, not the least important of which is the declaration made by some hundreds of men that combination for forcing up wages was prejudicial to their interests. Already numbers of them have suffered severely, and many months will elapse before they regain that state of comfort which they left at the instigation of interested persons. The lesson has been a dear one, and it is to be hoped will have a healthy effect. Trade continues active in the district, and several new collieries are nearly ready for drawing. At the Devonshire Silkstone they are putting in stays and conductors, the head gearing being already fixed. It is expected that by Monday or Tuesday next all will be completed, and drawing commenced with the large engine. The pit is 160 yards deep, the bed being what is known as the black shale, the same as the Yorkshire Silkstone seam, and the coal is of excellent quality. A number of coke ovens are now being worked by the company, the coke being of a remarkably fine character, and meets with a ready sale in Sheffield. The concern promises to be a very profitable one, and the shares—on which 5% has been paid—are at a premium of from 35s. to 40s. There is no alteration in the state of trade in Sheffield, some of the houses being tolerably well up in orders for heavy steel goods, but most branches complain of slackness. The dispute at the Atlas Works has terminated by a timely concession on both sides. At the Carr House Colliery, near Rotherham, the men have been agitating for an advance of wages, and have threatened to strike unless it is conceded. They have agreed to refer the matter to the executive of the Miners' Association, from the funds of which they will be supported in the event of a strike taking place.

The Iron Trade in South Yorkshire remains unaltered, with the exception of the works at Elsecar, where, in consequence of the bursting of some pipes, business has been stopped. Several firms are doing a fair trade in sheets, hoops, and plates, whilst at the works Penitone the greatest activity is observable, and a large quantity of double-webbed locomotive cranks, tyres, and carriage-wheels is being turned out. The demand for all qualities of coal continues good, and a heavy tonnage is being forwarded to London and the South of Silkstones and the best qualities of the Barnsley seam. There is also a good trade to Hull, Goole, and Grimsby for local consumption and exportation. The Great Eastern Railway are now carrying a much larger quantity to London than it has ever done before, the increase being something surprising. In September last the company only carried 10,500 tons; November, 22,804 tons; and in January, 54,019 tons—an increase unequalled by any of the other railway companies. A good business is being done by the Manchester, Sheffield, and Lincolnshire Railway, where increased accommodation is being provided by the making of an extra line of rails from Barnsley to Penitone. The Great Northern Company is also preparing a new and extensive depot near to Doncaster, where increased facilities will be afforded for the weighing of the coal and the dispatch of the trains to the South. The Coke Trade is active, and a large quantity is being sent to the ironworks in Lincolnshire and Staffordshire.

Only by the timely discovery of the perpetration of a piece of wanton mischief was a fearful accident prevented, the other day, at one of the Staveley Company's pits, at Chesterfield. A youth named Cavan was detected in the act of chopping at the wire-rope used in lowering the cage, and he had actually cut through eight or ten of the wires. On being asked why he had done it, he replied that there should be "a mess there before the day was out." Had the outrage not been discovered, and had the rope broken while in work, no doubt it would have been attended with loss of life. On Tuesday the magistrates sent him to gaol for 14 days.

At the Barnsley Court House James Firth was charged with tampering with and injuring a safety-lamp, and thereby endangering the safety of the miners in the pit in which he was employed. It appeared that the defendant was a miner in the Stradford Main Colliery, which is 240 yards deep, and in which a good deal of gas is made, and on Jan. 25 he was seen with a piece of wire trying to force up the glass of his Stephenson lamp. When the lamp was returned, it was found that the meshes were broken, and the lamp otherwise damaged. The Chairman said that, in the interests of the miners, the magistrates determined to punish severely all those who, by their recklessness, endangered the lives of others, and the defendant would, therefore, stand committed to Wakefield House of Correction for six weeks.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

FEB. 14.—There is scarcely anything fresh to report in connection with the Welsh Iron Trade, except that the movement for the better, which set in about a fortnight since, is well maintained, and a few more orders on home and foreign account have been placed during the week. There is undoubtedly a more favourable aspect as to the future of the trade, and there are grounds to hope that the decline in the rate of discount will create a still further favourable movement in the demand. The reduction in the rate of wages will also place masters in a much better position with regard to entering into transactions, so that they will be able to accept engagements more freely. Every little sign of an improvement is most acceptable, for the general state of the trade is very bad, although at the principal establishments the hands are tolerably regularly employed. Of late the American markets have taken considerable quantities, and there is a prospect of the demand keeping up, as there is no doubt but that the new Tariff Bill will greatly restrict operations, and buyers are anxious to secure as large a supply as possible before the Bill comes into operation, in order to reap the advantages of the high prices which are likely to rule afterwards. The exports of iron to the United States are of an average character, and of the quantity cleared out last month they took the largest proportion; in fact, they took 6010 tons of the 5775 tons cleared out at the port of Newport. Canadian spring orders are dropping in, and the prospects of trade with Russia and the other markets of Northern Europe are still encouraging. Transactions with Italy and the other markets of Southern Europe are quiet. No change has taken place during the past week in the demand for pig-iron, and, on the whole, purchases are made on a limited scale. There is a fair enquiry for the plates, and charcoal iron are quoted at 28s. to 29s. per box, with an addition of 1s. to 1s. 6d. per box delivered at Liverpool. In the Steam Coal Trade no material change has taken place in the demand. Proprietors are not quite so well off for orders as they were two or three weeks since, but still they are doing an average business, and the fact of freights advancing indicate that an improvement might be expected in the demand. There is a good inland traffic in Welsh steam by railway, which will be greatly extended on the introduction of the narrow-gauge system into the district by the Great Western Railway Company. House coal proprietors are enabled to keep their pits fairly employed, and there is no diminution in the quantity on coasting account.

We understand the Ynyspenllywch Tin-plate Company have completed the erection of machinery, which enables them to produce upwards of 1500 boxes of finished tin-plates per week, and have also placed the management of their works in the care of Mr. Richard Thomas, who has been connected with the Melyn Tin-Works, Neath, from their starting.

The advices just received from America are anything but satisfactory to the Iron Trade here—the latest debate reported being intensely protectionist—the Tariff Bill passed by the Senate, after more than 14 hours' debate, being almost prohibitory; articles other than iron, in which the readers of the Journal are interested, have not been better treated. The duty on wrought-iron washers, nuts, bolts, and rivets, has been increased from 2½ c. to 3 c. per lb.; steel carriage springs, from 6c. to 8c. per lb.; cast scraps, from 8s to 8½ per ton; wrought scraps, from 8s to 8½ per ton; glazed, tinned, or enamelled cast-iron hollow ware, to 4½ c. per lb.; cast-iron steam, gas, and water-pipes, from 2½ c. to 1½ c. per lb.; files, rasps, &c., over 10 inches long, from 6c. to 8c. per lb. An amendment was adopted by which, for two years, railway companies may import their iron, any provision of the law notwithstanding. The duty on nickel matte has been increased from 20 per cent. ad val. to 20c. per lb. Whether such important amendments will be accepted by the Lower House is by no means certain, more especially as the protection has been carried so far as to compel the use of American coal—the duty on bituminous coal being at 8½ per ton. The measure is so palpably an Eastern one that it has been received by the Western men with more than implied antagonism.

Mr. J. N. Moore, son of Mr. E. A. Moore, of Lonlas, has purchased the Dynevor, Brittdir, and Cwmdu Collieries for 15,000*l.*, a sum much below the mortgage upon them. In consequence of the property changing hands rejoicings took place at Neath, and a salvo of artillery announced the fact to the numerous creditors, who now hope to be able to get a dividend from the estate out of the purchase-money.

The workmen and others connected with the Navigation and Deep Duffryn Collieries (Messrs. Nixon and Co.'s), at Mountain Ash, have presented Mr. Thomas Douthwaite, for many years engineer to these extensive collieries, with a gold watch and appendages, of the value of 36*l.*, on his leaving the neighbourhood to fulfil the duties of his new appointment of engineer to the Tyne Coal Company, Newcastle-upon-Tyne, where his abilities will be brought into requisition in draining old collieries that have been for many years standing idle. The presentation was made by Mr. William Rees, one of the oldest workmen in the employ of the company, who spoke in high praise of Mr. Douthwaite, and wished him "good speed" in his new appointment.

The Gilvach Colliery was sold by auction, at the Angel Hotel, Cardiff, by order of the trustees. Mr. Robert Evans was the auctioneer, and there was a very numerous attendance of colliery proprietors, engineers, and others interested in collieries, amongst whom were Mr. Nash Edwards Vaughan (the

lesser of the colliery), Mr. Llewellyn, Messrs Lewis, Mr. Arthur O. Davies, Mr. Brogden, &c. After a smart competition, the property was knocked down at 47,80*l.* to Mr. Thomas, the gentleman who some time since purchased the Great Western Colliery, at Pontypridd.

The arrivals at Swansea include—the Annie Sharpe, from San Francisco, with 800 tons of copper ore, 3 tons of silver ore, and 11 tons of plumbago, for T. Wood and Co.; and the Henry Bath, from Chanaral, with 700 tons of copper ore, for Richardson and Co.

**THE ABERCARNE COLLIERIES—EXTRAORDINARY OUTPUT OF COAL.**—The district of Abercarne presented quite an animated appearance on Friday, consequent on the day being devoted by the workmen in the Prince of Wales, or No. 3 Pit of the colliery works belonging to the Ebbw Vale Iron Company (Limited), to ascertain what weight of coal could be put out of the pit in twelve hours. Some efforts had previously been made in the vicinity of Mountain Ash and other parts of the country, to ascertain the amount of the "black diamond" which could be raised in a given period, but the result of the exertions of the Abercarne men leave all competitors at a considerable distance. The pit, which is one of the nest in the district, is about 300 yards deep, with a shaft of 18 ft. by 23 ft., and a winding power consisting of a couple of direct-acting condensing engines of 42 in. cylinder and 8 ft. stroke. The machinery for pumping is also commensurate to the foregoing, being one of the best improved Cornish engines, of 48 in. cylinder and 10 ft. stroke. The present drain of water is kept down by two strokes a minute, and if necessary the engine is capable of performing seven strokes per minute. On looking at this stupendous arrangement of machinery, and the commodious premises it occupies, the beholder naturally concludes that there is nothing equal to them throughout the district, and particularly so when he notes the order, cleanliness, and regularity that pervade the whole. Yet, with all these gigantic appliances, some doubt existed as to what really were the working powers of the pit, a point which has been cleared up, to a considerable extent at least, by the newly-appointed manager of the works, Mr. Llewellyn Llewellyn, who has raised himself up from a door-boy to his present position, and who has long afforded proof of the possession of sound practical ability in everything that has reference to coal mining operations. Without making any extraordinary preparations for the coming event, it was quietly resolved that a trial should be made to ascertain what weight of coal could be put out in twelve hours, when the result proved that the extraordinary amount of 1369 tons had been landed at the pit's mouth in the time mentioned, which is placed beyond all doubt by the following figures:

	No. of trams.	Tons weight.	Hours.	No. of trams.	Tons weight.
1	89	94	7	117	124
2	114	121	8	112	119
3	110	117	9	114	121
4	114	121	10	108	115
5	108	115	11	104	111
6	106	113	12	92	98
Total		1288		1369	

J. M. REES, Machine Clerk.

This statement shows that the quantity of coal raised has exceeded by 300 or 400 tons any similar effort, and affords unquestionable proof of what men can accomplish when they proceed unitedly to work, in the vigorous manner these men have done. It ought to be mentioned that necessary precautions were taken to prevent accidents occurring by Mr. Llewellyn, who communicated with the overman at the bottom of the pit every two hours, and gave such directions as proved entirely successful in carrying out their intentions. Although this achievement is one of the noblest on record, yet it is considered that even more astounding feats can be accomplished at the same pits; and as it must be conceded that much of this success is owing to the directing skill of the manager, Mr. Llewellyn, we congratulate the shareholders of the Ebbw Vale Company in being enabled to command the services of a man who proves competent to develop and expand the working capabilities of this portion of their property to their full extent, thereby rendering it one of the most valuable they possess.

**FOREST OF DEAN.—The Iron Trade** is still brisk, and there is, we are happy to say, no thought of the realisation of the unpleasant "reduction," and it is much to be desired, both for the employer and employee, that such a course may not be deemed necessary. The production during the last few months has been lessened by the blowing out of a furnace some months since for repairs, which, by-the-by, was thought to have been completed by the 1st inst., but was not, and also Messrs. Gold Brothers' furnaces, at Soudley, undergoing similar reparations alluded to in previous notices. The tin works are still full of orders. This remark applies to Lydney, Parkend, and Lydbrook. The full complement of men at either of the works find constant employment. At the first-named work, they, the first week in the present month, turned out the unusual large number of 1132 boxes, and last week it exceeded 1000. The orders on hand are very satisfactory, and there being at the present time comparatively "no stock" adequate to meet any additional influx of orders, there is little to fear for some time of diminution in the labour market. In house-hold coal the reports of the week are cheering, the demand in some instances exceeding the supply. Especially is this the case with regard to the Parkend Coal Company, whose vessels have been detained at Lydney basin for seven or eight days awaiting their turn for freights. On Wednesday this was also the case. There is a corresponding amount of life on the Severn and Wye Railways, which the returns just made demonstrate. In comparison with the December month there is an excess of 1000 tons, it being 18,556 tons. The iron ore conveyed down this line was 4392 tons. Iron from Parkend furnaces, 227 tons; stone, 457 tons; general merchandise, 593 tons: thus making a total of 31,597 tons, as against 30,636 tons for the December month. The same favourable contrast is observable on the Cinderford branch of the South-Western Railway, being an excess of 4000 tons of coal. The aggregate conveyed to home-markets being 32,940 tons; iron ore, 4194 tons; pig-iron, 1611 tons; and other produce, 500 tons. As soon as arrangements can be made the old works at Moseley Green will be re-opened, and this will give another impetus to the Forest of Dean coal field trade, and employment to a large number of men.

#### FACILITATING TRANSIT IN LARGE TOWNS.

In a newly developed country one of the primary questions relates to the construction of roads commensurate with the probable amount of traffic eventually attending the progress of population. Should parsimony, or a contracted idea of future demand, prevail over a more expanded and correct prescience of the future, the difficulties attendant upon alteration and enlargement of the normal plan become serious, and frequently insuperable. In no instance is this rendered more palpable than in the Metropolis. The claims of posterity appear not to have ruled the counsel at the onset, and the same disregard for the future has, for a long period, been perpetuated, upon the principle, it may be supposed, of *laissez faire*, hence the perplexity of the present generation. Despite the appliances of skill and ingenuity which have been so remarkably exhibited of late years in relieving the great thoroughfares of London, they do not, by any means, keep pace with the demands contingent upon the stupendous increase of population and commerce. Bold, and even gigantic, measures have been adopted upon, above, and below the surface to remedy the existing evils, still perpetual stoppages ensue: whilst in proportion to the inconveniences, such as loss of time to the man of business, to whom proverbially time is money, and the annoyance of delay in reaching home after the fatigues and anxiety of professional engagements, are the manifold risks of a pedestrian tour through the densely crowded and dangerous streets. So paramount are these considerations, that the authorities, at almost any sacrifice of property, have swept away entire streets, set back houses by wholesale, razed churches and other public edifices, desecrated burial-grounds, and made openings in the busiest haunts of trade, and these, too, on areas that are valued at fabulous sums of money. It requires, however, but slight acquaintance with the subject to see that all these precautionary measures, praiseworthy as they are, yield but a small instalment of the demands of the coming age, and that, ere long, mere colossal steps must be adopted to stem the rapidly increasing evil; unless a well-devised system of Tramway can be introduced to relieve the streets of a great portion of the existing cause of complaint.

With a full conviction of the necessity of a radical change, this subject is now engrossing the attention of the representatives of the various local boards wisely organised throughout the metropolitan parishes. These officials, selected as the most astute members of each vestry, are exhibiting a zeal commensurate with the occasion, in devising and examining plans to remedy a state of things which, whilst they deplore, they were not implicated in engendering. The streets laid out in the time of Charles II. were, doubtless, sufficiently wide and commodious for that period, but who can dispute their inefficiency for the exigencies of the present time? The Bills of Mortality of the two epochs exhibit a marked difference. Then, the quaint lumbering vehicles were regarded as luxuries limited to the few wealthy courtiers and citizen princes; now, the public and private carriages have become the absolute necessities of a teeming mass of busy, plodding merchants, artisans, clerks, and others inseparably connected with a thriving and cosmopolitan commerce. Then, trade was in few hands, and those principally in easy circumstances, and unacquainted with the weighty pressure of competition of a high state of civilisation and a redundant community; now, the business habits of the majority have been stretched to the greatest degree of tension, and each labours under the conviction that nothing short of the greatest zeal and assiduity will enable him to reach the goal of his ambition, or even to obtain a place in the contest. To parties so circumstanced how vital is time, how important its economy!

Various expedients, as we have seen, have been resorted to in order to accomplish the end in view, and these attended with different degrees of success; much more remains to be done, and let us hope that a system which has been found to work remarkably well in other countries—France and America, to wit—will be adopted here. A Tramway, or rather a series of Tramways, divested of all the objectionable features which hitherto created a prejudice against them, and possessing all the improvements and modifications which mechanical skill can suggest, appears to present the best, if not the only, panacea untried.

For such a system an application is about to be made to the Legislature, and we have the assurance of those who have witnessed its progress with the utmost jealousy, and who claim no interest in its welfare, beyond the simple and loyal desire to countenance any devise to further the public weal, that the projected Tramway combines expedition, safety, cheapness, ease, and comfort, with a scrupulous avoidance of obstruction in the existing thoroughfares. It can hardly be expected that such a project will meet with any very formidable opposition, especially when it is known that the rails will be laid perfectly level with the crown of the roads, and the grooves so regulated as to preclude the possibility of the wheels of any other vehicles being interfered with in the slightest degree. Compared with the omnibus, the arrangements for the conveyance of passengers are incomparably with the tramway cars; not only is the pitch of the road more lofty, but, though the external width of the two vehicles is identical, an extra 12 in. internal width distinguishes the cars, this additional space being obtained by the body of the carriage extending over the wheels.

With a praiseworthy view of assisting in the important question of providing suburban dwellings for the working classes, the promoters anticipate being able to issue a

furnish special daily services at an exceedingly moderate rate, whilst no condition of weather—rain, frost, or snow—will be permitted to act as an impediment to the regular service, or form an excuse for an increased tariff. Little need be added upon the subject of the construction of the public vehicles which now monopolise the traffic of the metropolis.

Thanks to the discovery of steam-power, and the inventive genius of those who have applied it to locomotion, and brought the combination to its present state of excellence, extraordinary facilities have of late been afforded for the conveyance of the busy throng to the very heart of the modern Babylon. But even this resource is proved to fall far short of the absolute requirements in many districts. Omnibuses, always erratic in their movements, fail to supply the deficiency, whilst from their general construction and management they are by no means the *beau ideal* of an impatient or a comfort-seeking passenger. It is, therefore, evident that the introduction of an improved means of conveyance is only a question of time, and judging by the symptoms surrounding us, the time it may be confidently asserted has arrived for the employment of the system herein proposed.

#### Royal School of Mines, Jermyn-street.

**ROYAL SCHOOL OF MINES, JERMYN STREET.**—PROF. RAMSAY, F.R.S., will COMMENCE A COURSE OF THIRTY-TWO LECTURES ON GEOLOGY, on MONDAY, the 1st February, at Two o'clock, to be continued on each succeeding Tuesday, Wednesday, Thursday, and Monday, at the same hour. Fee for the course, £3.

PROF. WILLIS, M.A., F.R.S., will COMMENCE A COURSE OF THIRTY-SIX LECTURES ON APPLIED MECHANICS, on TUESDAY, the 19th February, at Twelve o'clock, to be continued on each succeeding Wednesday, Thursday, Friday, and Tuesday, at the same hour. Fee for the course, £3.

TRENHAM REEKS, Registrar.

**CAPT. S. MICHELL, of NEW TRELEIGH MINE, REDRUTH,** has PROCURED SEVERAL MINING SETTS, TWO of which are situated in the neighbourhood of the CHIVERTON MINES, and are traversed by several large SILVER-LEAD LODES peculiar to that district; and one in ILLGAN, containing five lodes, all of which are productive in COPPER, BLENDÉ, MUNDIC, and LEAD. Also, a MUNDIC SETT, that he can safely recommend. Capt. S. MICHELL will not object to negotiate with any respectable party with a view to DISPOSING OF or WORKING these VALUABLE PROPERTIES.

## In Chancery.

CLEWS V. ALCOCK.

**M**R. JOHN HIGGINGTON WILL SELL, BY AUCTION, pursuant to an order of the High Court of Chancery, made in the above cause, with the approbation of the Judge to whose Court the said cause is attached, at the Railway Hotel, Stoke-upon-Trent, in the county of Stafford, on Thursday, the 28th day of February, 1867, at Four o'clock in the afternoon, in Nimb Lots, an undivided FOURTH PART of and in certain

**FREEHOLD AND IMPORTANT MINERAL PROPERTY,** situate at Bucknall, in the parish of Stoke-upon-Trent, in the county of Stafford, comprising TWO FARM HOUSES, and ARABLE, MEADOW, and PASTURE LAND, and DWELLING HOUSES, and of and in HEREDITAMENTS in Hanley, Staffordshire, and the ENTIRETY of HEREDITAMENTS in Burslem.

## PARTICULARS.

LOT 1.—An undivided FOURTH PART of and in a FARM HOUSE and OUTBUILDINGS, at Bucknall, in the parish of Stoke-upon-Trent, in the county of Stafford, with all those several closes of ARABLE, MEADOW, and PASTURE LAND thereto belonging, as hereinafter described, and in the occupation of William Slater, as tenant from year to year, at an annual rent of £174.—

No. on plan. Description. Quantities. A. R. P.

1.—Homestead at Bucknall	1 0 0
2.—Barn meadow	3 2 11
3.—Cottage meadow	3 1 0
4.—Near Hot Croft	2 2 10
5.—Far Hot Croft	5 1 4
6.—Nip or Jack Croft	2 1 0
7.—Fell Brook Meadow	4 3 3
8.—Household or Olders Meadow	4 1 30
9.—Part of Birchamley and Beamsley	8 0 30
10.—Part of Birchamley	5 1 20
11.—Ditto	2 2 24
12.—Knowl Rowley	2 1 37
13.—Ditto	1 1 15
14.—Ditto	3 3 13
15.—Ditto	0 2 39
16.—Ditto	0 3 0
17.—Ditto	3 3 25
18.—Ditto	0 2 31
19.—Far Calf Croft	2 0 14
20.—Near Calf Croft and Slang	3 2 34
21.—Heath	3 0 33
22.—Long Rowley	10 2 9
23.—Rowley Bottom	1 3 22
24.—Rough Shaw	8 2 34 = 87 0 38

25.—And also of and in a malt-house hereto held with the said farm, but now untenanted; also, an undivided fourth part of and in two cottages or dwelling-houses, adjoining the homestead of the said farm (herefore occupied as one dwelling-house, and then and now called Bucknall Cottage), with the garden, pleasure-ground, out-buildings, and appurtenances thereto belonging, and therewith held in the occupation of Joseph Twigg and Sarah Heywood, as tenants from year to year, at the annual rental of £18.—

Also, an undivided fourth part of and in another farmhouse, out-buildings, garden, and appurtenances, situated at Bucknall aforesaid, called Fellbrook, adjoining the first-described farm, together with those several closes of arable, meadow, and pasture land thereto belonging, as hereinafter described as now in the holding of John Deavey, as tenant from year to year, at the annual rent of £28.

26.—Homestead at Fellbrook

0 1 35	
27.—Meadow	3 2 32
28.—Part of Birchamley	0 0 37
29.—Ditto	0 3 4
30.—Birchamley	4 2 23
31.—Ditto	1 1 28 = 11 1 5

Also, an undivided fourth part of and in several closes of meadow and pasture land, situated near to the village of Bucknall aforesaid, called the Colley Hills, as hereinafter described, in the holding of John Docksey, as tenant from year to year, at the yearly rent of £45, which includes the rent of the two cottages, comprising Lot 3, the same being let together.

32.—Big Colley Hill and lane..... 6 1 5

33.—Near ditto..... 1 3 23

34.—Far ditto..... 2 3 14 = 11 0 2

Also, the undivided fourth part of and in other closes of meadow or pasture land, called the Sandy Finney, situated at or near Northwood, Hanley, in the county of Stafford (separated from the farm lastly described by the River Trent), as hereinafter described, in the occupation of Edward John Ridgway, Esq., as tenant from year to year, at the yearly rent of £32.

35.—Sandy Finney..... 10 0 37 = 10 0 37

Total..... 120 1 15

The mines of coal in this estate are very extensive and valuable, and comprise three distinct series—“The Upper,” which is known by the names of the Mossfield coal, Yard coal, Ragman coal, and Birches coal, and it is estimated of these coals there are about 16 acres of each seam under the estate.

“The Middle” contains the 10-foot coal, Bowler-alley coal, Holly-Jane coal, and the Sparrow Butts or Hard Mine coal, which are proved in the immediate district to be of good quality for house firing and manufacturing purposes; of this series of coal it is estimated there are about 70 acres of each seam under the estate.

“The Lower” contains the Banbury coal, Cockshed coal, Bulbush coal, and the Wipenny coal. The first three seams are of good quality for household and manufacturing purpose. Of this lower series it is estimated there are about 110 acres of each of these seams under the estate. In addition to the above, there is a detached portion of about 11 acres, containing the Bulbush coal and the Wipenny coal, with two pits sunk upon it, and an engine-house erected.

The estate being within easy distance of the towns of Hanley and Stoke-upon-Trent, and being intersected by the Biddulph Branch of the North Staffordshire Railway, possesses extraordinary facilities of disposing of the coals when got.

LOT 2.—An undivided FOURTH PART of and in all that MESSUAGE or DWELLING HOUSE, situate at Bucknall aforesaid, with the out-buildings, yard, garden, stable, and appurtenances thereto belonging; and also of and in all that close of meadow or pasture land, situate at the rear of such dwelling-house, known as the Big Paddock, as hereinafter described as now in the holding of Jeremiah Beardmore, as tenant from year to year, at the annual rate of £25.

36.—House, yard, garden, and offices..... 0 1 24

Big paddock..... 0 3 37 = 1 1 21

This villa residence, from its desirable situation, being within easy distance of the Staffordshire Potteries, and possessing every requisite convenience, renders it a desirable residence for a gentleman engaged in commercial pursuits.

LOT 3.—An undivided FOURTH PART of and in those TWO COTTAGE DWELLING HOUSES, or TENEMENTS, out-buildings, yard, garden, and appurtenances, situated in the village of Bucknall aforesaid, formerly occupied as a public-house, and called the Dog and Partridge Inn, as now in the holding of John Docksey and another, as tenant from year to year. These two cottages are held with the land called the Colley Hills, as before mentioned. A. R. P.

37.—Two cottages out-buildings, yard, and garden..... 0 0 28 1/4

LOT 4.—An undivided FOURTH PART of and in all that MESSUAGE or DWELLING HOUSE, occupied as a beer-house, and called the “Crown and Cushion,” situated at Northwood, in the borough of Hanley, with the crown, yard, and appurtenances belonging thereto, as now held by Messrs. Baker and King, or their undertenant, as tenant from year to year, at the annual rent of £22. N.B.—The mines are reserved under this lot.

LOT 5.—An undivided FOURTH PART of and in all that PLOT or PARCEL of LAND, situate in Empson-street, adjoining High-street, in the town and borough of Hanley aforesaid, and having a frontage thereto of 96 ft. 3 in., as the same is now enclosed by a brick wall, adjoining the property of Mr. W. Wilson, and contains about 55 yards.

LOT 6.—An undivided FOURTH PART of and in all those TWO COTTAGES OR DWELLING HOUSES, or PREMISES situate in Queen-street, adjoining Broad-street, in the borough of Hanley aforesaid, in the holding of Elizabeth Tew and John Pritchard, as weekly tenants, at the weekly rents of 2s. 2d. each.

LOT 7.—An undivided FOURTH PART of and in all that COTTAGE OR DWELLING HOUSE and PREMISES, situate in Union-street, within the borough of Hanley aforesaid, as now in the holding of James Stevenson, as weekly tenant, at the weekly rent of 2s. 2d.

N.B.—An annuity of £20, payable during the life of a gentleman, aged 57 years or thereabouts, is charged on the entirety of the foregoing lots. One-fourth of the amount, or £5 per annum, will be made payable out of Lot 1.

LOT 8.—The ENTIRETY of TWO FREEHOLD DWELLING-HOUSES, numbered 12 and 14, Liverpool-road, Burslem, No. 12 being in the occupation of Thomas Robinson, as tenant from year to year, at the annual rent of £25; and No. 14, with cooper’s shop in front, in the occupation of Andrew Cliff, as tenant from year to year, at the annual rent of £15. This lot has a commanding frontage to Liverpool-road, and the site contains 614 yards.

LOT 9.—The ENTIRETY of a DWELLING-HOUSE, No. 2, High-street, Burslem aforesaid, in the occupation of Thomas Pass, as tenant from year to year, at the annual rate of £12 10s.

Lithographed plans and printed particulars and condition of sale may be had, of Messrs. ASHURST, MORRIS, and Co., of 6, Old Jewry, in the City of London, solicitors; of Mr. ALCOCK, solicitor, Burslem, Staffordshire; JONES HIGGINBOTTOM, of Fenton, Staffordshire; Mr. C. J. H. HOMER, mineral Surveyor, Chatterley, near Tunstall, Staffordshire; Mr. RALPH HALE, surveyor, Cobridge, Staffordshire; and of Mr. W. E. TWIGG, solicitor, Burslem.

**A C C I D E N T S W I L L H A P P E N !** Everyone should, therefore, provide against them!

**ACCIDENT OF ANY KIND** (riding, driving, hunting, shooting, fishing, &c.), may be secured by an Annual Payment of from £3 to £6 5s. to the

**RAILWAY PASSENGERS’ ASSURANCE COMPANY,** The Oldest Established and Largest Company in the World insuring against ACCIDENTS OF EVERY DESCRIPTION.

For particulars apply to the Clerks at any of the Railway Stations, to the Local Agents, or at the OFFICES,—64, CORNHILL, and 10, REGENT STREET, LONDON.

WILLIAM J. VIAN, Sec.

## In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

**I**N the MATTER of the COMPANIES ACT, 1862, and in the NEW WHEAL MARTHA MINING COMPANY (LIMITED).—Notice is hereby given, that ALL CREDITORS of the ABOVE-NAMED COMPANY are REQUIRED, on or before the 23d day of February inst., to SEND IN THEIR NAMES and ADDRESSES, and the AMOUNTS and PARTICULARS of THEIR SEVERAL CLAIMS on the said company, to the liquidators thereof, addressed to them, at the offices of their solicitors, the undersigned Messrs. Geach and Franklyn.

J. G. CHILCOTT, Truro  
(Agent for Geach and Franklyn, 27, Great Winchester-street, London,  
Solicitors for the Liquidators).

Dated 13th February, 1867.

## In the Court of the Vice-Warden of the Stannaries.

Stannaries of Cornwall.

## In the Consolidated Causes of—

TREGASKIS V. RABEY.

READ V. SAME.

BRAY V. SAME.

**T**ENDERS will be RECEIVED at the Registrar’s Office, Truro, until the 27th inst., stating the highest price which will be given for the undemanded MINING MACHINERY and MATERIALS, viz.:—

ONE 24 in. PUMPING ENGINE, with BOILER complete.  
Capstan and shears, horse whim and shaft tackle, 9 in. matching, 8 in. working barrel, 9 ft. 8 in. pumps, 9 ft. 9 in. ditto, 9 in. windorse, plunger pole, stuffing box and gland, working barrel, 9 in. doorpiece and door, pump rods, rod plates, whim and winze kibbles, 3 ft. 4 in. shleves, yokes, chain staples, and glands, rod bolts, chain, capstan socket, 5 ft. 6 in. pumps, 6 in. matching, ditto windorse, working and doorpiece to match, screw stocks and plates, useful iron, 4 ft. 8 in. pumps, 8 in. doorpiece, ditto sinking windorse, ditto working, 33 pulleys, slack seatings, saddles and bracket, castings, spindles, and bevels, and sundry material in general use in mines, and now being in and upon SOUTH WHEAL LEISURE MINE, in the parish of Perranzabuloe, within the said Stannaries.

For further particulars, apply to the person in charge thereof.

HODGE, HOCKIN, AND MARRACK, Solicitors, Truro.  
JOSEPH ROBERTS, Solicitor, Truro.

Dated Registrar’s Office, Truro, February 14th, 1867.

## TO MINE AGENTS, IRONFOUNDERS, RAILWAY CONTRACTORS, BUILDERS, AND OTHERS.

**M**ESSRS. BUCKLAND AND RENDELL WILL SELL, BY PUBLIC AUCTION, on Monday and Tuesday, 25th and 26th February, 1867, at the WEST BEAM MINE, near ASHBURTON, the VALUABLE MACHINERY and MATERIALS thereon, comprising:—

ONE 56 in. cylinder STEAM PUMPING ENGINE, 9½ ft. stroke, equal beam, and TWO BOILERS 11 tons each, in excellent condition.

ONE 40 in. cylinder STEAM PUMPING ENGINE, 10 ft. stroke, equal beam, and ONE BOILER about 11 tons (nearly new), with a cast-iron balance-boil.

ONE 24 in. cylinder ROTARY STEAM ENGINE, fly-wheel and drawing gear attached, and ONE BOILER about 11 tons, in excellent condition.

ONE WATER-WHEEL, 30 ft. diameter, 3 ft. breast, iron rings, axle, pumping crank, and powerful DRAWING MACHINE attached, nearly new.

ONE WATER-WHEEL, 30 ft. diameter, 4 ft. breast, iron rings, axle, and ratchet wheels.

ONE WATER-WHEEL, 24 ft. diameter, 3 ft. breast, cast-iron axle and cog wheels.

ONE WATER-WHEEL, 20 ft. diameter, and 3 ft. breast.

2 large capstans, iron axles.

2 shears, 54 ft. and 60 ft. high.

1 poppet head, 36 ft. high.

2 iron stamping axles for 24 heads.

2 ditto ditto for 16 heads

2 ditto ditto for 12 heads

2 ditto ditto for 24 heads

with wood frames and lifters

5 ft. 18 in. pumps.

21 in. ditto, 15 in. ditto.

20 in. ditto, 12 in. ditto.

19 in. ditto, 11 in. ditto.

18 in. ditto, 10 in. ditto.

17 in. ditto, 9 in. ditto.

16 in. ditto, 8 in. ditto.

15 in. ditto, 7 in. ditto.

14 in. ditto, 6 in. ditto.

13 in. ditto, 5 in. ditto.

12 in. ditto, 4 in. ditto.

11 in. ditto, 3 in. ditto.

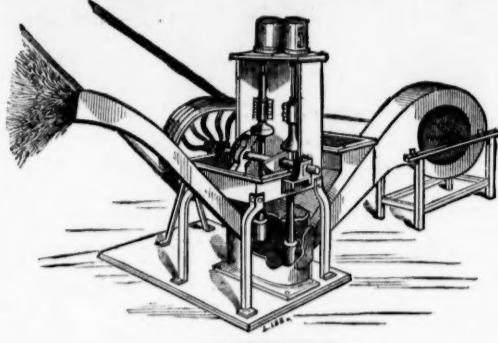
10 in. ditto, 2 in. ditto.

9 in. ditto, 1 in. ditto.

8 in. ditto, 1 in. ditto.

7 in. ditto, 1 in. ditto.

6 in. ditto, 1 in. ditto.

**CHILD'S PATENT  
ATMOSPHERIC ORE STAMP AND QUARTZ CRUSHER.**


THIS is an IMPROVED STAMP, and will give as many blows per minute as an ordinary 10-stamp mill, and of far greater force, giving an effective blow of from 150 to 200 tons per minute, and will crush any known ore to an impalpable powder, saving every particle of the product for future operations,—a result not before obtained by any stamping process. Greater economy is combined than by any other known method. The patentee has a machine near his office, where he invites (by appointment) experienced and practical miners, engineers, chemists, metallurgists, and all others interested, to inspect its results. Every facility will be given for experiments upon different ores, and all other substances to be crushed.

For particulars, address— A. B. CHILDS,

No. 481, NEW OXFORD STREET, LONDON, W.C. 121

**INEXPLOSIVE BLASTING POWDER**

(Invented by G. A. NEUMAYER)

**CANNOT EXPLODE WHEN EXPOSED TO AIR!**

ALL INTERESTED IN COLLIERIES, MINING, AND ENGINEERING OPERATIONS are invited to TEST this NEW INEXPLOSIVE COMPOUND, which meets with great favour upon the Continent, where it has been in use for some time past.

This powder combines STRENGTH with SAFETY to a degree never before known.

It is more economical than ordinary blasting-powder:—

1.—Because it is cheaper in first cost.

2.—It is lighter than the blasting-powder now in use.

3.—With same bulk (which is less weight) more effect is produced.

EDWIN H. NEWBY is now prepared to register orders for the above.

Particulars, post free, on application to the offices, No. 39A, KING WILLIAM STREET, CITY, LONDON.

**BOWLING IRON COMPANY, BRADFORD, YORKSHIRE.**

BEST CRUCIBLE CAST-STEEL TYRES, AXLES, CRANK AXLES, BOILER PLATES,

Also COG WHEELS, and other CASTINGS.

This company is prepared to furnish the above-mentioned articles in CAST STEEL of a very superior quality, made principally from their own well-known

**"BOWLING IRON."**

Also BOWLING WROUGHT-IRON SOLID WELDLESS TYRES, of any size and to any section.

**BAGILLT OIL COMPANY (LIMITED), FLINT.**
**MANUFACTURERS OF BLACK GREASE**

FOR COLLIERY WIRE ROPE, TRAMS, WAGONS, &c., £5 PER TON

TORCH AND LAMP OIL, 1s. PER GALLON (Casks free).

LUBRICATING OIL, 1s. PER GALLON (Casks free).

STEEL! STEEL!! STEEL!!!

JOHN TURNER, SHEFFIELD, AND STOCKTON-ON-TEES, MANUFACTURER OF SUPERIOR REFINED CAST STEEL for

**MINERS' DRILLS,**

CUP and TURNING TOOLS, price and quality not surpassed. Try one delivered free at manufacturers' prices.

J. TURNER keeps in stock all kinds of tools suitable for engineering, mining purposes, and shipbuilders, at the Stockton depot, where all communications are requested to be sent.

**GLAHOLM AND ROBSON, HENDON PATENT ROPERY, SUNDERLAND.**

MANUFACTURERS of ALL DESCRIPTIONS of STEEL IRON, and HEMP ROPES for COLLIERIES, SHIPS, &c.

**JOHN AND EDWIN WRIGHT, PATENTEES.**

(ESTABLISHED 1770.)

**MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED PATENT FLAT AND ROUND WIRE ROPES,**

From the very best quality of charcoal iron and steel wire.

**PATENT FLAT AND ROUND HEMP ROPES.**

SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPAULING, OIL SHEETS, BRATTICE CLOTHS, &c.

UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.

UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.

No. 2, OSWALD STREET, GLASGOW.

CITY OFFICE, No. 5, LEADENHALL STREET, LONDON, E.C.

Swan Rope Works.

**GARNOCK, BIBBY, AND CO., CHAPEL STREET, LIVERPOOL.**

MANUFACTURERS of FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES for MINING, RAILWAY, and SHIPPING PURPOSES.

MANILLA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER and THIRTY PER CENT. CHEAPER than Russian hemp rope.

WIRE ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

**COAL CUTTING MACHINERY.**

The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are now READY to MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.

The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.

All communications to be made to Messrs. FIRTH, DONNISTHORPE, and BOWER,

No. 8, Britannia-street, Leeds.

**NOTICE.—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice to those who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.**
**ITRO-GLYCERINE, OR NOBEL'S PATENT BLASTING OIL.**

The EXPLOSIVE FORCE of this BLASTING OIL is TEN TIMES that of GUNPOWDER, and the ECONOMY and SAVING in TIME, LABOUR, and COST in removing granite and hard rock, in sinking shafts, driving tunnels, and opening forward in close ends is immense.

It will not explode from a spark or fire, but from concussion alone, and is consequently much less dangerous than gunpowder or gun-cotton.

Being heavier than water it sinks to the bottom of a wet hole, no other tampering required.

A charge of this blasting oil, which is now being used with wonderful effect in all the largest slate quarries in North Wales, will displace as much slate rock as four or five charges of gunpowder; and its great force, acting on a large quantity of slate rock, shales, and slates at the natural joints, or cleavage, without damaging the slabs nearly so much as the more numerous slates from any other blasting material would.

This invaluable quarrying agent may now be obtained from Messrs. WYLDE Co., Carnarvon, sole consignees from the patentee.

**THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764.)**

Published every Saturday, price 2d., or quarterly 2s. 2d.

**THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.**

Published every morning, price 1d.

Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

**IMMENSE SAVING OF LABOUR.  
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, MCADAM ROAD MAKERS, &c., &c.**
**BLAKE'S PATENT STONE BREAKER  
OR ORE CRUSHING MACHINE,**

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.  
It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—

*The Parrys Mines Company, Parrys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.*  
*For the Parrys Mining Company, JAMES WILLIAMS.*  
*H. R. Marsden, Esq.*

*Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it gives great satisfaction. Some time after starting the machine a piece of the moveable jaw about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.*  
*H. R. Marsden, Esq.*

*Alkali Works, near Wednesbury.—I at first thought the outlay too much for a simple article, but now think it money well spent.*  
*WILLIAM HUNT.*

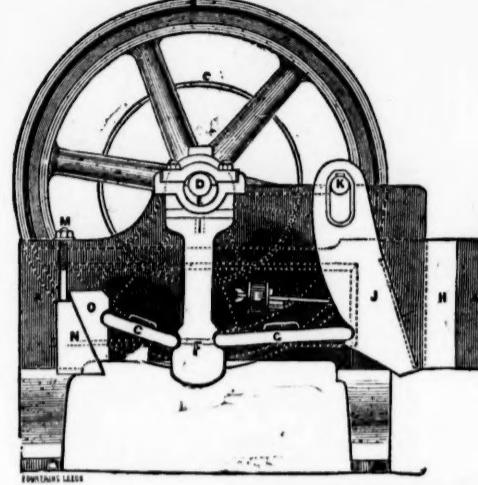
*Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz.*  
*WM. DANIEL.*

*Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust.*  
*Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.*

*Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.*  
*JOHN LANCASTER.*

*Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.*  
*WM. G. ROBERTS.*

*General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or \$75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate.*  
*SILAS WILLIAMS.*



For circulars and testimonials, apply to—

**H. R. MARSDEN, SOHO FOUNDRY,  
MEADOW LANE, LEEDS,  
ONLY MAKER IN THE UNITED KINGDOM.**
**GIFFARD'S PATENT INJECTOR COMPLETELY SUPERSEDED BY  
THE NEW PATENT DONKEY STEAM PUMP**
**[SPECIFICATION.]**

This Pump is constructed on an entirely novel and simple principle, there being only a crank-shaft and fly-wheel of small size, the slide-valve being worked inside the steam chest by means of a steel crank and friction roller, thus dispensing with eccentric, rod, and straps. All the working parts are made of steel, hardened and polished. The cylinder and pump are in one casting, and bored through out the body of the pump as well as the stuffing-box. The pump-ram is of the best gun-metal, being cast in one piece with the piston and piston-rod, and fitted accurately to the bore of the pump, thus ensuring a nearly perfect vacuum in pumping. The stuffing-box glands are also of gun-metal polished. The valves and boxes are of the best gun-metal, the valves being of the spherical description, the covers fitted with brass cages, and the joints faced metal to metal. The slide-valve is of hard bell-metal. The steam-chest, with cylinder end, is in one piece, and may be removed without disturbing either steam or exhaust pipes. The whole engine may be taken to pieces and put together under steam in fifteen minutes, without disturbing any pipes whatever.

Ram.	Stroke.	Approx. in.	Approx. in.	Price, in brass.	Price, in iron.
4.	4	1 1/4	3	230 £10 10	£16 10
5.	5	1 1/4	3	350 12 12	13 10
6.	6	1 1/4	4	500 14 14	16 10
7.	7	2 1/4	4	700 17 0	19 10
8.	8	2 1/2	5 1/2	900 19 10	22 10
9.	9	2 1/2	5 1/2	1180 22 10	25 10
10.	10	2 1/2	6 1/2	1420 25 10	28 10
11.	11	2 3/4	6 1/2	1720 28 10	31 10
12.	12	2 3/4	8	2000 31 10	34 10

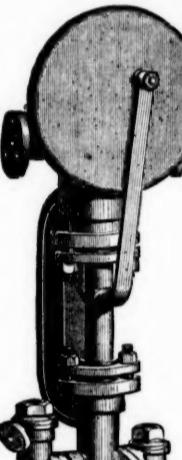
N.B.—Sizes and capacities similar to Giffard's Injector. All guaranteed to work efficiently.

TERMS: Net Cash on Delivery in London.

Giffard's injector will not force water over 120° Fahr., while these pumps possess the great advantage of being able to pump boiling water. Giffard's injector will not draw water over 6 ft. deep, while these pumps draw 15 ft., and by using one size larger than required for forcing the quantity will draw 30 ft. deep. These pumps begin to work at 15 lbs. per square inch; to work at a lower pressure the next larger size must be used. Sizes up to No. 10 kept in stock. Larger sizes, and special pumps for throwing water into tanks, or as fire-engines, can be made in a few days on application to the undersigned.

**BROWN, WILSON, AND CO.,**

80, CANNON STREET, E.C.; AND VAUXHALL IRONWORKS, S.



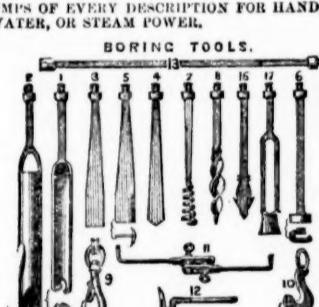
FRONT ELEVATION.

BICKFORD'S PATENT SAFETY-FUSE OBTAINED the PRIZE MEDALS at the ROYAL EXHIBITION of 1851, at the INTERNATIONAL EXHIBITION of 1862, in London, and at the IMPERIAL EXHIBITION held in Paris, in 1865.

**BICKFORD, SMITH, AND CO.** of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—  
EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS AS THEIR TRADE MARK.

**S. OWENS AND CO. (LATE CLINTON AND OWENS),** WHITEFRIARS STREET, FLEET STREET, LONDON, E.C., HYDRAULIC AND GENERAL ENGINEERS, MANUFACTURERS OF PUMPS OF EVERY DESCRIPTION FOR HAND, HORSE, WATER, OR STEAM POWER.

BORING TOOLS.



Portable Engines with Double Barrel, or other Pumps, on Hire or Purchase.

Full information, Drawings, Price Lists, &c., relating to the above, and to Hydraulic Machinery of all descriptions—Crabs, Pulleys, Blocks, and hoisting Tackles of superior manufacture—may be had on application.

CREASE'S NEW AND IMPROVED PATENT BORING MACHINE.—In consequence of the various and IMPORTANT IMPROVEMENTS that an experience of several years has enabled the inventor to introduce into these machines, he can with the most perfect confidence recommend them for their increased DURABILITY, SIMPLICITY, ECONOMY, and SPEED to be attained by their adoption in DRIVING LEVELS or DRIFTS.

The inventor has made arrangements to supply them in any quantity, with warranty. Orders executed according to their date of priority.

Address, EDWARD S. CREASE, Tavistock, Devon.

**THOMAS TURTON AND SONS,</**

## THE MINING SHARE LIST.

## BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500 Alderley Edge, c, Cheshire*	10 0 0 ..	—	8 12 0 ..	0 5 0 ..	Jan. 1867		
200 Botallack, t, c, St. Just	91 0 0 ..	—	485 15 0 ..	5 0 ..	May, 1866		
10000 British Slate Company	9 0 0 ..	—	9 per cent.	..	Sept. 1866		
4000 Brookwood, l	1 11 0 ..	—	0 5 0 ..	0 2 6 ..	Sept. 1866		
1000 Bronfoddy, l, Cardigan*	12 0 0 ..	—	8 7 0 ..	0 6 0 ..	Aug. 1866		
6400 Cashwell, l, Cumberland*	2 10 0 ..	1 1 1/2 ..	0 1 6 ..	0 1 6 ..	Aug. 1866		
916 Cargill, s-l, Newlyn	15 5 7 ..	—	13 15 0 ..	1 0 0 ..	Feb. 1866		
867 Cwm Erynn, l, Cardiganshire*	7 10 0 ..	—	21 18 0 ..	1 0 0 ..	Jan. 1867		
128 Cwmystwyth, l, Cardiganshire	60 0 0 ..	—	372 10 0 ..	5 0 ..	Dec. 1866		
280 Derwent Mines, s-l, Durham	300 0 0 ..	—	167 0 ..	5 0 ..	Oct. 1866		
1024 Devon Gt. Consols, c, Tavistock*	1 0 0 ..	425 ..	400 420	1048 0 ..	0 6 0 ..	Jan. 1867	
355 Dolcoath, c, t, Camborne	128 17 6 ..	—	821 10 0 ..	3 0 ..	Feb. 1867		
6144 East Cadron, c, St. Cleer	2 14 6 ..	6 ..	5 1/2 6 ..	14 7 6 ..	0 2 0 ..	Jan. 1867	
304 East Darren, t, Cardiganshire	32 0 0 ..	—	136 10 0 ..	2 0 ..	Nov. 1866		
128 East Pool, f, c, Pool	24 5 0 ..	—	390 0 ..	2 10 0 ..	Jan. 1867		
5000 East Rosewarne, c, Gwinear	2 15 0 ..	1 1/4 ..	0 10 6 ..	1 6 ..	Jan. 1867		
1904 East Wheal Lovell, f, Wendron	3 9 0 ..	10 1/4 ..	2 7 6 ..	0 7 6 ..	May, 1866		
2800 Foxdale, l, Isle of Man*	25 0 0 ..	—	69 10 0 ..	0 10 0 ..	Jan. 1867		
5000 Frank Mills, t, Christow	3 18 6 ..	—	3 5 6 ..	0 5 0 ..	Feb. 1866		
15000 Great Laxey, l, Isle of Man*	4 0 0 ..	17 ..	15 16 ..	5 15 0 ..	0 10 0 ..	Dec. 1866	
5905 Great Wheal Vor, t, c, Helston	40 0 0 ..	18 ..	17 18 ..	10 17 6 ..	0 7 6 ..	Dec. 1866	
1024 Herodsfoot, t, near Liskeard*	8 10 0 ..	—	39 0 ..	1 10 0 ..	Oct. 1866		
6000 Hington Down, c, t	5 10 6 ..	—	0 10 0 ..	0 5 0 ..	April, 1866		
400 Lisburne, l, Cardiganshire, Wales	18 15 0 ..	—	483 10 0 ..	3 0 ..	Nov. 1866		
9000 Marke Valley, c, Cardonan	4 10 6 ..	4 1/2 ..	3 11 0 ..	0 2 0 ..	Jan. 1867		
3000 Minera Boundary, l, Wrexham*	1 0 0 ..	—	0 13 0 ..	3 0 ..	Mar. 1866		
1800 Minera Mining Co, t, Wrexham*	25 0 0 ..	—	205 8 0 ..	3 0 ..	Nov. 1866		
20000 Mining Co, of Ireland, c, t, c, t	7 0 0 ..	—	18 1/2 18 1/2 ..	—	5 7 ..	Jan. 1867	
40000 Mwndy Iron Ore*	3 5 0 ..	—	0 6 6 ..	0 2 6 ..	Mar. 1866		
— New Merrybent and Middleton*	3 10 0 ..	—	5 per cent.	..	Nov. 1866		
600 Pant-y-Giln, s-l	20 0 0 ..	—	10 per cent.	..	May, 1866		
200 Parys Mines, c, Anglesey	50 0 0 ..	—	157 10 0 ..	5 0 ..	Jan. 1866		
1129 Providence, t, Uny Lelant	10 6 7 ..	30 ..	26 28 ..	81 17 6 ..	0 10 0 ..	Nov. 1866	
512 South Cadron, c, St. Cleer	1 3 0 ..	320 ..	310 320 ..	544 10 0 ..	0 10 0 ..	Jan. 1867	
6000 South Darren, t, t	3 6 6 ..	13/4 ..	0 5 6 ..	0 2 6 ..	June, 1866		
6000 Tincroft, c, t, Pool, Illogan	9 0 0 ..	14 2/4 ..	13 13 1/4 ..	18 11 0 ..	3 0 ..	Jan. 1867	
3000 W. Chilverton, l, Perranzabuloe	10 0 0 ..	65 ..	60 62 ..	15 7 6 ..	0 2 0 ..	Nov. 1866	
400 West Wheal Seton, c, Camborne	47 10 0 ..	140 ..	132 1/2 137 1/2 ..	464 14 0 ..	0 10 0 ..	Dec. 1866	
512 Wheat Basset, c, Illogan	3 2 6 ..	70 ..	62 2 0 ..	1 0 0 ..	Oct. 1866		
1024 Wheat Friendship, c, Devon	20 0 0 ..	—	300 10 0 ..	0 10 0 ..	Nov. 1866		
4235 Wheat Kitty, t, St. Agnes	5 4 6 ..	3 1/2 ..	3 1 3/4 ..	3 0 2 0 ..	2 0 ..	Feb. 1866	
1024 Wheat Mary Ann, t, Menheniot	8 0 0 ..	12 1/2 ..	12 12 ..	60 7 6 ..	10 0 ..	Dec. 1866	
2000 Wheat Rose, c, Scorrier	10 10 0 ..	123 ..	10 11 ..	1 0 0 ..	10 0 ..	Feb. 1866	
396 Wheat Seton, c, t, Camborne	58 10 0 ..	123 ..	102 1/2 107 1/2 ..	329 5 0 ..	3 0 ..	Feb. 1867	
1040 Wheat Trellawny, s-l, Liskeard*	5 17 0 ..	12 ..	34 5 6 ..	0 5 0 ..	Dec. 1866		
7000 Wicklow, c, 4, Wicklow	2 10 0 ..	24 1/2 ..	25 25 1/4 ..	45 15 0 ..	0 18 0 ..	Oct. 1866	

## BRITISH MINES WITH DIVIDENDS IN ABEYANCE.

1200 Bryn Gwyn, l, Mold*	9 0 0 ..	—	3 3 6 ..	0 13 6 ..	Aug. 1865	
2500 Clifford Alumagamated, c, Gwen.	32 0 0 ..	63 1/2 ..	61 1/2 7 ..	35 6 0 ..	0 10 0 ..	June, 1865
1058 Craddock Moor, c, St. Cleer	11 12 0 ..	—	7 12 0 ..	0 4 0 ..	5 0 ..	June, 1865
6000 East Barn Brear, c, Redruth	3 15 0 ..	3 1/2 ..	3 3 1/4 ..	0 5 0 ..	0 5 0 ..	June, 1865
6000 New Birch Tor and Vitifer Cons, t	1 6 6 ..	—	0 13 0 ..	0 2 0 ..	Oct. 1865	
6000 West Basset, c, Illogan	1 10 0 ..	1 ..	3 1/2 1/4 ..	26 14 0 ..	0 5 0 ..	July, 1865
1024 Wheal Exmouth, t, Christow	— ..	— ..	— ..	0 2 6 ..	Oct. 1865	

## FOREIGN DIVIDEND MINES.

15000 Cape Copper Mining*	7 0 0 ..	9 ..	8 1/2 9 ..	2 12 6 ..	0 10 0 ..	April, 1866
2100 East Indian Coal, Calcutta	10 0 0 ..	—	3 3 6 ..	0 13 6 ..	Aug. 1865	
2400 Fortuna, t, Spain*	2 0 0 ..	24 ..	134 2 1/4 ..	1 5 4 ..	0 2 0 ..	Oct. 1866
2000 Gen. Mining Assoc., Nova Scotia	20 0 0 ..	21 ..	18 21 ..	22 0 ..	1 0 0 ..	June, 1866
10000 Gonnese, t, £5000 £pd., 5000 £pd.]	— ..	— ..	7 1/2 per cent. per annum.	..	..	..
15000 Linares, t, Spain*	3 0 0 ..	—	11 6 4 ..	0 5 0 ..	Jan. 1865	
5000 Panulicello, c*	3 0 0 ..	3 1/2 ..	2 1/2 3 ..	10 per cent.	..	Yearly
10000 Pontigbaud, s-l, France	20 0 0 ..	8 ..	4 3 2 ..	1 3 6 ..	Dec. 1866	
100000 Port Phillip, c, Clinnes*	1 0 0 ..	1 ..	3 1/2 7 ..	0 16 6 ..	0 1 0 ..	Jan. 1866
120000 Scottish Australian Mining Co.	1 0 0 ..	1 ..	1 1/2 1/2 ..	7 1/2 per cent.	..	Dec. 1866
110000 St. John del Rey, Brazil**	15 0 0 ..	54 ..	52 54 ..	72 15 0 ..	4 0 ..	Dec. 1866
30000 Victoria (London) [25000 £pd., 25000 £pd., 12d. pd.]	1 0 0 ..	— ..	0 9 0 ..	0 1 0 ..	Jan. 1866	
40000 West Canada Mining Company*	1 0 0 ..	— ..	0 19 6 ..	0 2 6 ..	May, 1865	

## FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000 Alten and Quengangen United,*	4 10 0 ..	—	4 5 0 ..	0 13 5 ..	Nov. 1858	
20000 Australian, c, South Australia	7 7 6 ..	—	31 1/2 ..	0 10 0 ..	June, 1865	
24400 Burra Burra, c, South Australia	5 0 0 ..	—	325 0 ..	0 5 0 ..	Dec. 1864	
12900 Cobre Company, c, Chile	40 10 0 ..	—	101 0 ..	0 1 0 ..	Jan. 1865	
10000 Copico Mining Company, Chile	16 10 0 ..	—	6 18 0 ..	0 10 0 ..	Nov. 1865	
10000 Don Pedro, Net of the Rey, Brazil**	0 14 0 ..	1 1/2 ..	1 1/2 21 ..	0 9 0 ..	0 9 0 ..	Dec. 1865
70000 English and Australian, c, t	2 10 0 ..	—	1 12 0 ..	2 ..	0 1 0 ..	June, 1866
60000 Kapunda Mining Co, Australia	1 0 0 ..	—	0			